American Druggist and Pharmaceutical Record.

A JOURNAL OF PRACTICAL PHARMACY.

VOL. XXIV. No. 8. NEW YORK, FEBRUARY 22, 1894. WHOLE No. 287.

AMERICAN DRUGGIST PUBLISHING COMPANY,
37 College Place, New York.
A. R. ELLIOTT, President.

— SUBSCRIPTION PRICE. —

For the United States and Canada, -	$2.00
If paid in advance direct to this office,	1.50
For Foreign Countries, - - - - -	2.50
Single Copies, - - - - - - - - -	15

The AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD is issued on Thursday of each week. Changes of advertisements and all copy for publication should be received before Tuesday of each week.

We are not responsible for any money paid to agents. All remittances should be made direct to this office. Express Orders, Post-Office Orders and Drafts on New York should be made payable to the American Druggist Publishing Company and addressed to them at 37 College Place, New York.

Liberal Commissions to Club Agents.

BEFORE purchasing look at our latest market report. Remember it comes out weekly.

WHEN cutters find out these two things: first, that they cannot buy cheaper than their neighbors the retail druggists, and that they will not be allowed to sell lower, then the worst of the fight is over. If we can get together and pull together even in this large city we can get both of these facts lodged in the minds of the cutters. Dr. TSCHEPPE, who is not a visionary enthusiast, said at the League convention that he thought we could. It's worth trying.

THE introduction of an amendment to the WILSON bill before its passage in the House providing for a tax of $1 per pound on crude opium occasioned some comment at the time, and now, as reported in our drug market last week, it is claimed that the introduction of the tax was the work of a speculator who, after assuring himself of its introduction, secured an option on the bulk of the visible supply of opium abroad. This means that if the tax remains as it now stands he will be enabled to bring in a large supply of opium prior to the date of the bill going into effect, and thus benefit by the difference in price between duty free and duty-paid opium. As the crop of opium does not begin to come into the market in Smyrna until the latter part of August it is only last year's crop that the speculator needs to look out for. The advance that has already occurred has been sufficient to net a large profit to him.

WE take pleasure in acknowledging the courtesy shown by that representative body of pharmacists the *New Yorker Deutscher Apotheker-Verein* in tendering this journal a vote of thanks for its good offices. The best interests of the retail drug trade are the interests of THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD. Whatever we can do to forward the interests of that trade always will be as it always has been done, and it is highly gratifying for us to be made aware by the special vote of thanks of the Interstate League two weeks since and of the *New Yorker Deutscher Apotheker-Verein* last week that our efforts have been well directed and are appreciated.

WHERE THE RESPONSIBILITY LIES.

THE old question of the nature and extent of the legal responsibility attaching to the druggist who negligently compounds an improperly written prescription has been revived and given fresh point in a recent number of the *International Medical Magazine*.

With most physicians it is a matter of belief that the carelessness of the druggist in failing to detect error in a given prescription makes the latter liable in damages to the injured party. That this belief does not prevail in the medical profession alone will at once occur to every pharmacist, since pharmacists themselves have been influential in spreading this impression.

In the law courts the prevailing tendency is to make all concurrent negligent agents jointly and severally liable in damages to the injured party; so that a druggist may be held jointly responsible with the physician for any negligence and damage resulting from the administration of an improperly written prescription; but the druggist alone cannot be held individually responsible.

The opinion of the court in a case recently on trial where it was sought to prove liability on the part of the druggist for the mistake of the physician is interesting in view of the differences of opinion which prevail in regard to these cases. The action to which we have reference is commented upon at length by the legal editor of the *International Medical Magazine* as follows:

This action, which was against the physician alone, was for damages for negligence, and the complaint alleged the prescription of a "poisonous medicine, to wit, the tincture of opium, otherwise known as laudanum." The negligence which was the basis of the action consisted in improperly writing *pulv.* instead of *camph.* after *opii*. The result was that the infant for whom the medicine was prepared took it and died.

The prescription was headed "For GEORGE BAKER (baby)," and the physician testified that he had directed the family to take his prescriptions to another drug store than the one where it was filled.

The proper form for a prescription of laudanum, as the preponderance of evidence showed, is "*Tr. opii*," and the addition of *pulv.* is not used though it adds nothing to the meaning, while the addition of *camph.* does change it.

On behalf of the physician an offer was made (which the trial court refused) to prove a custom among druggists in the city of X. to the effect that where a prescription shows on its face, as this one does, that it is for a baby, such prescription would not be filled without consultation with the physician; and arguing that the negligence of the druggist, which the physician could not anticipate, was the proximate cause of the misfortune, thus relieving the physician from liability.

But the Appellate Court took a different view of the matter, and decided that, "at most, the negligence of the druggist concurred with that of the physician in producing the result, and this," as above stated, "is not a defence." "No error was committed, therefore, in refusing to admit evidence of the custom" sought to be established; and the judgment of the lower court mulcting the physician in damages was affirmed.

The court, in affirming this judgment, said, in effect, that the consequences were such as should reasonably have been foreseen, and that such slips of the pen, whereby human life is jeopardized, are inexcusable, as not showing the exercise of that reasonable degree of care which the law requires.

ANOTHER PURE FOOD AND DRUG BILL.

CONGRESSMAN HATCH of Missouri is sponsor for a bill to prevent the adulteration and misbranding of foods and drugs and for other purposes. Although framed on the same general lines as the obnoxious PADDOCK bill it contains less objectionable features than the latter and will probably receive the support of many in

the trade who were instrumental in preventing the passage of the PADDOCK bill.

The sections of the HATCH bill applying to drugs is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or from any foreign country, of any article of food or drugs which is adulterated or misbranded within the meaning of this act is hereby prohibited, and any persons who shall knowingly violate any provision of this act shall be guilty of a misdeanor, and for such offense be fined not exceeding two hundred dollars for the first offense, and for each subsequent offense not exceeding three hundred dollars, or be imprisoned not exceeding one year or both in the discretion of the court.

SEC. 2. That the term "drug" as used in this act shall include all medicines for internal or external use. The term "food" as used herein shall include all articles for food or drink by man, whether simple, mixed or compound. The term "misbranded" as used herein shall include all drugs or articles of food, or articles which enter into the composition of food, the package or label of which shall bear any statement, purporting to name ingredients or substances as being contained or not being contained in such article, which statement shall be false in any particular.

SEC. 3. That for the purposes of this act an article shall be deemed to be adulterated,

In the case of drugs,

First. If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity according to the tests laid down therein.

Second. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other Pharmacopœia, or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity according to the tests laid down in said work.

Third. If its strength or purity fall below the professed standard under which it is sold.

Fourth. If it be an imitation of or sold under the specific name of another article.

"A FOOL AND HIS MONEY."

FROM the South there has come word from time to time of an ingeniously simple fraud, but one which seems to prove profitable, as the perpetrator adheres to his methods, changing his name only from time to time.

The fraud consists of the sale of six formulas for making cheap liquors, the price obtained varying from three to ten dollars in proportion to the credulity or means of the victim. The formulas are printed sometimes in red and sometimes in black ink, and the name of LEHN & FINK, or rather of LEHM & FINK, for so it is spelled, is printed on the sheets. In one copy of the circular the words "get goods at" precedes the name and address. Below we reproduce one of the circulars. In another copy the cost per gallon of each compound is added.

Pattern of Home Industry, United States Seal.

OCTOBER 15, 1885.

PORT WINE.

5 gallons 95 per cent. alcohol.
5 gallons clear water.
2 ounces German glycerine.
2 gallons oil of port wine.
Shake well; add 30 gallons clear water; color to suit the eye with tincture of alonet. Shake well in rack; in 3 and 7 days ready for use.

HOLLAND GIN.

5 gallons 95 per cent. alcohol.
5 ounces German glycerine.
2 gallons oil Holland gin.
1 gallon extract Juniper gin.
Shake well; add 30 gallons clear water. Shake well in rack; in three and 7 days ready for use.

LEHM & FINK,
128 William street, New York.

MEADFORD RUM.

5 gallons 95 per cent. alcohol.
5 gallons clear water.
2 ounces German glycerine.
2 gallons oil Meadford rum.
Shake well; add 30 gallons clear water. Shake in rack; in 3 and 7 days ready for use.

CORN WHISKEY.

3 ounces tincture alonet.
4 ounces powdered alonet.
1¼ gallons 95 per cent. alcohol.
Shake well; add 30 gallons clear water; shake well; let stand one week, ready for use.

LEHM & FINK,
128 William street, New York City.

RYE WHISKEY.

5 gallons 95 per cent. alcohol,
5 gallons clear water.
2 ounces German glycerine.
2 gallons oil rye whiskey.
Add 30 gallons clear water; color to suit the eye with burnt sugar, 1 pound. Shake in barrel; 3 and 7 days ready for use.

LEHM & FINK,
128 William Street, New York City.

CALIFORNIA BRANDY.

5 gallons 95 per cent. alcohol.
5 gallons clean water.
2 ounces German glycerine.
2 gallons oil California brandy.
Shake well; add 30 gallons clear water; color to suit the eye, with burnt sugar, one pound. Shake in rack; in 3 and 7 days ready for use.

LEHM & FINK,
128 William Street, New York City.

The use of the words "United States Seal" and of the name of a reputable wholesale drug firm are the only redeeming features of an otherwise stupid scheme.

In approaching his victims the operator represents himself as an agent for LEHN & FINK, and to the simple minded and frequently ignorant class selected as victims the words "United States Seal" mean quite as much as would an official document with a veritable seal of the government upon it.

Messrs. LEHN & FINK are frequently in receipt of orders for some of the ingredients directed in the formulas, and the character of the letter together with the quantities ordered generally furnishes a clue to the situation They then answer, warning the would-be patron of the impracticability of carrying out the directions, and of the fraud that has been perpetrated.

Last summer the operator was caught by a vigorous young woman of Savannah, Ga., whom he had swindled, but he succeeded in getting free on some technical count.

It is quite likely that the purchasers of these marvelous formulas will apply to their local druggists for the materials and thus give an opportunity for apprehending the rascal. It is largely because of the hope that this may occur that we give the matter so much prominence.

THE MAN, THE MAID, AND THE MONEY.

FROM ECHO and NARCISSUS in the Isles of Greece to SARAH BESAM and her cousin DAVID in Delancey street is a far cry in time and place, but the gods of those days were very mortal in their attributes. A touch of nature annihilates space and merely external conditions, reproducing the fragile, love-lorn wood nymph of prehistoric days in the adipose, commonplace "Eastsider" of to-day.

For Miss BESAM loved not wisely but too well her fascinating cousin DAVID, who, wearying of the incense of affection burning constantly for him on the altar of her virgin heart, sought new conquests, leaving the maiden all forlorn.

Sigh no more, ladies, sigh no more,
Men were deceivers ever.

So this maid forlorn, after the fashion of TITANIA, sought a philter to fetch back his love. Aye, in this plain and cold *fin de siécle* she sought a love philter and was told by one versed in the Black Art that she should first give him a dollar and a cent, which were wrapped together and placed between the mattresses of the bed as a peace offering to the Devil, while the Devil's helpmate, the sorcerer, took a dollar for his own fee. His Satanic Majesty accepted the offering, leaving instructions for the maiden to purchase and drink a bottle of his, the Devil's, blood—the genuine unadulterated being obtainable only from SOLOMON BERNSTEIN, the sorcerer in the case, giving DAVID one teaspoonful. The "blood" cost $6 65. DAVID drank it under duress, but complained that it was nasty—a thing natural, we presume, to this variety of blood.

Our disconsolate nymph next procured from the sorcerer a black fluid, and following out the directions given went out into the back yard at 2 30 in the morning in her stocking feet and splashed herself with the fluid. According to programme the moon should then have shone upon her and all her requests been granted, but it was not to be.

Alas and lack-a-day! the necromancer's art was all in vain (for the maid, not for the wizard) and the good gold with which she had crossed the sorcerer's palm weighed upon her mind, so, having lost faith, she endeavored to regain her eighty dollars.

Verily a quaint jumble of love and jealousy and ignorance and superstition.

Pharmacists may frequently avert some such serio-comic tragedy, not by merely laughing at the applicant for a love philter but by seriously and earnestly warning the would-be customer of the folly of the expectations entertained. For there are still occasional calls for "love powders" even in our city stores.

Written for the American Druggist and Pharmaceutical Record.

PHARMACY UNDER THE WHITE TSAR.

By Vladimir Knipowitsch.

In Russia the "Little Father," as the White Tsar is familiarly termed, among the lower classes, is an influence guiding every step from the cradle to the grave. The system of paternalism which leads the *moujik* or peasant to designate the head of the government "Little Father" fosters multitudes of government officials either openly or secretly employed, the pay of which is wrung at infinite cost from a tax-ridden people.

While much has been done of late to give to the modern world some accurate idea of the nineteenth century medieval civilization I do not think that any free-born American citizen can ever fully comprehend save after personal observation or experience the extent to which government espionage is carried in Russia.

At every turn one must be provided with official documents. The fact of your birth and of your confirmation and of your attendance at school must all be officially certified to, and so of every act until the account is closed by the hand of death and the undertaker receiving all your official documents adds one more and gives you an official permit to rest in your grave.

On leaving after a four years' course at the "gymnasium," a course about equivalent to that of the average American college such as Cornell or Brown, the youth destined to become a pharmacist, enters the store of some apothecary, remaining generally at the same store for the whole of his three years' novitiate at a salary of from 15 to 20 roubles per month and board and washing. The course at the "gymnasium" includes Latin, Greek, German, French, Russian (the Slavs are great linguists), general literature, geography, mathematics, and general theoretical physics.

The *Vratchschebnoié upravlénie* or medical police board of each *goubernie* or State keeps a record of each individual apprentice from the time he enters the store until he is buried. When he leaves the employment of a pharmacist the employer reports that fact to the *Vratschebnoié upravlénie* stating how long the assistant has been with him and what his record has been during that time. This board then issues to the *aptekarski uschenik* or pharmacy scholar, as he is styled, a kind of official recognition in the shape of a *conduit journal*, which the *uschenik* must preserve. When he obtains another situation he must turn in to his new employer his *conduit journal* and also a police certificate of good behavior covering the period during which he has not been employed.

When going to rent apartments in a house the first demand of the janitor is, "give me your passport"; being a scholar he must also hand him his *conduit journal*, both of which are at once registered at the headquarters of the district police. When leaving this police district he must obtain a district police certificate of habitation and good behavior and this certificate must be handed, together with the medical board's certificate or *conduit journal*, to his new employer.

After three years' practice the young pharmacist must pass an examination before the university board, which grants a certificate as *aptekarski pomoschnik*, or, literally, apothecary's assistant.

The law requires each pharmacy to have in it all that is necessary for the student to study for the assistant's examination such as an herbarium, a full line of chemicals, the Russian and the Universal Pharmacopœias and certain specified books, among which the *Aptekarski usta* or official compilation of all laws concerning pharmacy.

Such other text books as are required, as those on botany, pharmocognosy, pharmacology and pharmaceutical chemistry, must be furnished by the student himself, though it generally happens that these books will be found in the library of the employer.

The university board examinations are held every three months at all those universities which have a medical department (the medical and pharmaceutical departments are always combined). Of these there is one at Moscow, at Warsaw, at Kieff, at Dorpat, at Odessa, at Charkoff, at Tomsk, and at Kazan. The medical academy at St. Petersburg is exclusively for military surgeons, who must practice in the army for at least five years after graduation; no pharmacists are admitted there.

The *uschenik* is at liberty to select any of these universities at which to appear for examination. Having made his choice he must send in a written application accompanied by an official certificate of his birth and baptism, certificate of confirmation, certificate from the gymnasium or college, his *conduit journal*, and if he happens not to have been continuously employed during his *uschenikeskié godi*, or years of apprenticeship, he must also furnish police certificates of good behavior, so that the university authorities have before them a complete official record of the whole life of the candidate.

The grade of questions asked is somewhat like but still different from those of the minor examinations in England, the *staats examen* of Germany or the questions put for the degree of graduate of pharmacy at the better class of American colleges of pharmacy. They are rather more difficult than either the English or American examinations, particularly along the line of botany, pharmacognosy, and terminology.

If successful the candidate receives a diploma as assistant or *pomoschnik*, who can command a salary of 35 to 45 roubles per month and board. After three more years of practice the assistant takes up his final university course, attends lectures for two years, the sessions lasting from August till the beginning of May, his whole time being occupied for those months. During the summer the *pomoschnik* or student generally seeks and obtains employment.

After his two years at the university, if he passes the examination, he is awarded the degree of *Professorium Pharmaciensis*.

As *professorium* or full-fledged pharmacist he will receive from 75 to 100 roubles per month with board, and may begin to look around with a view to setting up in business for himself.

If studiously inclined the *professorium* may go in for study, and spending one year longer at college come up for the degree of *Magister Pharmaciensis*. For this degree he must pass an examination in higher physics and chemistry and must present and defend an original thesis, some member of the faculty being designated to oppose him.

If our *Professorium* desires to open a new store, he must first get a governmental permit, to obtain which requires considerable governmental influence and also a liberal use of money both with the local and the general medical police.

In small towns one pharmacy is allowed for every 7,000 inhabitants, while in large cities the ratio is set as 1 to 10,000. In sparsely settled rural districts the ratio may be higher than 1 to 7,000, but the stores in this case must not be nearer each other than seven miles.

Moscow, with a population of 700,000 inhabitants, has, or did have when I was last there, 57 pharmacies, and it is here that I saw Carl Ferrierrs' pharmacy, the largest retail pharmacy in Moscow, and I believe the largest in the world. There is put up there on an average 1,000 prescriptions daily.

If the pharmacist happens to have some means he may be able to purchase a store. If he does he will generally have to pay for it just double the average annual receipts of the store

Socially, the Russian pharmacist occupies a position of some honor. By the *moujiks* or peasants he is termed *Bariu*, as all people are who are above the rank of the peasant. Other customers address him as *Herr Professor*, while the peasants sometimes call him *Gaspardin Professor*. Of service in the Russian army as apothecary I may write later.

A Lecture Experiment.

When charcoal, which has been allowed to absorb as much sulphuretted hydrogen as it can take up, is introduced into oxygen gas, the charcoal will burst into flame owing to the energy of the action of the oxygen upon the sulphuretted hydrogen.

This fact is stated in most text-books on chemistry, but no description that we have ever seen of this experiment is calculated to bring about the effect with certainty. The following is a simple method for illustrating this reaction upon the lecture table, which according to G. S. Newth (in *Nature*) is never known to fail:

A few grammes (from five to ten) of powdered charcoal are introduced into a bulb which is blown in the middle of a piece of combustion tube about twenty-five centimeters long. A gentle stream of coal gas is then passed over the charcoal, which is heated by means of a bunsen lamp until it is perfectly dry. This point may be ascertained by allowing the issuing gas to impinge upon a small piece of mirror, and when no further deposition of moisture takes place the charcoal may be considered to be dry, and the heating may be stopped. The charcoal is then allowed to cool in the stream of coal gas until its temperature is so far reduced that the bulb can just be grasped by the hand, when the coal gas is replaced by a stream of sulphuretted hydrogen. The sulphuretted hydrogen should be passed ever the charcoal for not less than fifteen minutes, by which time the bulb and its contents will be perfectly cold, and the charcoal will have saturated itself with the gas. (In practice it will be found convenient to prepare the experiment to this stage, and allow a very slow stream of sulphuretted hydrogen to continue passing through the apparatus until the experiment is to be performed.) The supply of sulphuretted hydrogen is then cut off, and a stream of oxygen passed through the tube. Almost immediately the charcoal will become hot, and moisture will be deposited upon the glass. The supply of oxygen should be sufficiently brisk to carry the moisture forward from the charcoal, but not so rapid as to prevent it from condensing on the glass tube beyond the bulb. In a few moments the temperature of the charcoal will rise to the ignition point, when it will inflame and continue to burn in the supply of oxygen.

ADEPS LANÆ.

By Ferdinand Lascar, Ph.G.

Articles on adeps lanæ which have appeared recently in the foreign pharmaceutical press prompted me to procure samples of the product for comparative examination with the substance remaining after the removal of the water from the wool fat of the Pharmacopœia.

I found adeps lanæ free from alkalies and fatty acids and neutral to phenolphthalein; when heated with sodium hydrate not the faintest trace of ammonia could be detected, while the amount of ash remaining after incineration did not exceed the quantity allowed by the Pharmacopœia, the ash at the same time being free from any alkaline reaction.

The new wool fat was found to be superior in some respects to a number of the hydrated wool fats now on the market. Its melting point, for example, was lower, and all attempts to saponify it with alkalies were unsuccessful. In the Pharmacopœia the melting point of anhydrous wool fat is stated at 40° C. (104° F.), but I found the new adeps lanæ to melt at less than 35° C.

The new product would seem to be indicated in dermatological practice where a fat of low melting point is often desired; especially where it is intended to mix an anhydrous ointment base with oils, fats, etc. Another excellent property possessed by this new product is its ability to combine with large quantities of water. It takes up nearly three times its weight of that liquid, and for this reason is splendidly adapted for salves containing saline ingredients, and for cold creams, cosmetics, and kindred cooling salves. If to this we add its elegant consistency, which makes it softer and less sticky than other products, and the fact that it is absolutely free from glycerin, we may arrive at an understanding as to why such eminent practitioners as Dr. Unna and Dr. A. Sack, of Heidelberg, speak of it so highly.

It has hitherto been a matter of exceeding difficulty to produce an absolutely pure *adeps lanæ anhydricum* from the impure article, the *œsypus* of Dioscorides and Celsus, Liebreich being the first, I believe, who succeeded in turning out a pure product.

In the *Pharmaceutische Centralhalle* G. Vulpius mentions the curious fact that certain investigators have claimed to detect free chlorine in adeps lanæ by adding nitrate of silver in alcoholic solution or an aqueous solution added to a warm solution of adeps lanæ in alcohol; but it was afterward found that the precipitate formed in this way was caused by a lowering of temperature through the addition of the cold test solution.

Soap Formulæ.

Sulphur Soap.—Cocoanut oil, 1,000 parts, is saponified with 500 parts of caustic lye of 50° B., and 75 parts of sulphur.

Camphor and Sulphur Soap.—Cocoanut oil, 1,200 parts; soda lye of 38° B., 600 parts; potassium sulphate, 100 parts; dissolved in water, 50 parts, and 16 parts of camphor dissolved in the cocoanut oil.

Tar Soap.—Melt together 20 parts of cocoanut oil and 3 tar, and saponify in the ordinary way with 25 parts caustic lye of 40° B.

Chilblain Camphor Soap.—1,000 parts of cocoanut oil are saponified with 500 parts of caustic soda lye of 40° B., and a solution of 75 parts of camphor in 100 parts of alcohol and 50 of water stirred in.

Pharmaceutical Progress.

Curcin.—A. Siegel finds in the seeds of *Jatropha Curcas*, L., a poisonous principle, curcin, which he considers analogous to ricin, and places in the class of toxalbumins (*Bot. Centralblatt*, xlvii., 120).—*Phar. Jour.*

Bernheim's Nutritive Enema.—The *Union Médicale* gives the following formula: Concentrated bouillon, ten ounces; pulp of boiled meat, an ounce; Malaga wine, six drachms. Such an enema, administered every three hours, it says, is sufficient to maintain nutrition.

Green Wonder Oil?—This was a favorite cure-all in Pennsylvania many years ago, and is prepared as follows: Venice turpentine, four ounces; sulphate zinc, fifteen grains; acetate of copper, one and one-half ounces; balsam peru, one drachm; olive oil, one pound; linseed oil, one pound. Boil the oils, add the turpentine and zinc, when warm when almost cold add the other ingredients, and stir well.

A Toluol Thermometer.—A toluol thermometer has been patented in Germany, of which it is hoped that it will replace both the mercury and the spirit thermometer. As with the latter, the indicating substance in the toluol thermometer can be colored with aniline; it is much cheaper than mercury, less objectionable in manufacture, and possesses five times the power of expansion of quicksilver. Toluol freezes at—50° C. and boils at 170°.

Inertness of Quicklime.—V. H. Veley finds that dry chlorine does not combine with dry lime, at ordinary temperatures, to form bleaching powder. No appreciable change is observable in the two substances below a temperature of 300°, when a partial replacement of oxygen by chlorine takes place; the reaction being analogous to that occurring between baryta and chlorine, not especially dried, and at ordinary temperatures (*Journ. Chem. Soc.*, ccclxxiv., 1).

An Anti-coryzal Snuff.—M. Grellety recommends the following formula for a snuff to be employed against that common malady, a "cold in the head": Betol, 2 Gm., 50 Ctgr.; menthol, 25 Ctgr.; hydrochlorate of cocaine, 15 Ctgr.; roasted coffee, 1 Gm., 50 Ctgr. Powder finely, and pass through a fine sieve. M. Jullien believes the best application to be vaseline associated with boric acid, and condemns all powder, which he accuses of bringing about the concretion of the muco-purulent discharge.

Cristalline.—This is a kind of collodion in which the ether and alcohol are replaced by methylic alcohol as a solvent. It evaporates more slowly than ordinary collodion and forms a durable, translucid pellicle, said to be imperceptible on the skin. It has been employed in combination with various medicaments in cases of skin disease, and readily dissolves pyrogallic and salicylic acids, chrysarobin, sublimate, etc. By the addition of castor oil an elastic cristalline may be obtained as in the case of collodion.

Rhodinol and Camphene in Essential Oils.—Monnet and Barbier have separated rhodinol, which constitutes the odorous principle of otto of roses, from the essential oil of pelargonium. The figures and reactions obtained on analysis of the compound seem to indicate its complete identity, both physically and chemically, with that from the better known source. Bouchardat affirms the existence of a dextrogyre camphene in the oil obtained from *Lavandula spica*, and Oliviero finds a similar compound in that from wild valerian

Women as Students in Germany.—The German universities, which have long kept their doors closed against the admission of women, are now beginning to put them ajar. The National Science Faculty of Heidelberg was the first to admit female students to its lectures, and now the faculty of philosophy of the same university has adopted a resolution that there exists no objection in principle against the acquisition by female students of the doctor's degree. The lady with respect to whose application this decision was come to will therefore be admitted to the examination.

Indestructible Claywick.—*The American Monthly Microscopical Journal* brings mention of a lampwick made entirely of clay giving 25 per cent. more light than cotton wick. The clay is made capillary by incorporating with it while in a plastic state filaments of unspun vegetable fiber which are burned out in the process of baking, leaving capillary tubes running longitudinally through the wick through which the oil from the lamp will be raised to the flame by capillary attraction. Owing to the perfect combustion of the wick, the flame is perfectly white in character, devoid of odor and smokeless. It is found, through a practical test, that the oil is volatilized by the use of this wick and the vapor is consumed, thus giving the above results.

A New Sulphide of Carbon.—A. E. Tutton describes a new liquid sulphide of carbon isolated in the laboratory of the University of Buda-Pesth by Professor von Lengyel. The liquid has a specific gravity of 1.2739, and when heated it polymerises into a hard black substance. Analyses of the liquid and solid indicate the same empirical formula, C_3S_2, for both. The liquid can be only partially distilled *in vacuo*, and in a few weeks it spontaneously changes into the more stable black solid. It readily ignites, and is dissolved by caustic alkalies, as well as by 70 per cent. nitric acid. The liquid sulphide combines readily with six atoms of bromine, and the compound formed, $C_3S_2Br_6$, has, curiously enough, a pleasantly aromatic odor.—*Nature.*

Bulgarian Rose Oil.—Markownikoff and Reformatsky (*Journal für Prakt. Chem.* 48, 1893) give the following noteworthy results of an investigation on the chemistry of this body. The chief constituent of the elœopten in rose oil is an alcohol of the formula $C_{10}H_{20}O$. It belongs to the series of the allyl alcohols, and is isomeric with allyldipropyl carbinol (boiling point 192°) and allylpseudodipropyl carbinol (boiling point 169°–171°). It forms an acetic ester $C_{10}H_{19}O.CH_3.CO$, which occurs as a colorless liquid, with no similitude to rose oil in taste. A determination of the molecular refraction shows the necessity for the presence of a doubly linked carbon atom, and two atoms of bromine are also taken up easily. By oxidation with potassium permanganate, a trihydric alcohol, $C_{10}H_{19}(OH)_3$, is formed, together with its acetic ester, a yellow liquid insoluble in water, and soluble in alcohol and ether, while the alcohol is a very thick viscous substance resembling glycerin, easily soluble in water, less so in alcohol or ether. The stearopten, prepared in a pure state by repeated re-crystallization from 98 per cent. alcohol, is a solid, with a melting point of 36°.5, and a boiling point of 350°-380°. Elementary analysis and a determination of molecular weight by Raoult's method show that the body is a hydrocarbon of the fatty series of the formula $C_{16}H_{34}$. It occurs in glassy white crystalline tablets

Testing Red Oxide of Mercury.—M. G. Patein (*Journ de Phar*) finds that certain samples of commercial red oxide of mercury contain traces of metallic mercury and mercurous oxide, due to the employment of too much heat during the process of oxidation. These impurities may be detected thus: On porphrizing, the color should not change, and on adding to 1 part of the oxide in a test tube 20 parts of distilled water, and then gradually drop by drop hydrochloric acid until the oxide is dissolved, the solution should be perfectly clear and limpid; if the oxide has been partly decomposed the solution will not be complete, the insoluble residue consisting partly of metallic mercury in a finely divided state, and partly of mercurous chloride, formed from the mercurous oxide present.

Phenol Sodique.—According to the *New Idea* there is considerable difference in the composition and proportional parts of the ingredients according to the N. F. formula and the reputed formula for the proprietary article called phenol sodique, which is a synonym for solution of carbolate of sodium, N. F. (Liquor Sodii Carbolatis) The proprietary article is a dark colored, almost black, thin liquid, sp. gr. 1.015, and alkaline in reaction. According to Mr. Geo. M. Berringer (Phila. Col. Ph. Proc.) it contains 66 per cent. of tarry matters and about 1 per cent. of phenols which are not separated upon diluting with water; it also contains about 1.5 per cent. of soda. The following formula he says, yields a preparation essentially the same.

Coal tar	2 troy ozs.
Caustic soda	120 grains
Water q. s. to make	19 fl. ozs.

Dissolve the soda in 4 fluid ounces of warm water, add the coal tar, and thoroughly agitate for a few minutes. Then add the remainder of the water and set aside in a covered vessel in a warm place, frequently agitating for seven days. Decant and filter.

It will be seen that the above formula is represented by 10.8 per cent. of coal tar, 1.44 per cent. of caustic soda, and about 87¾ per cent of water, whereas the N. F. formula contains 50 per cent of carbolic acid, 3⅓ per cent. of caustic soda and 46⅔ per cent. of water.

Glucosides of the Alcohols.—E. Fischer (*Berichte Phar. Jour.*) nas observed that when a solution of grape sugar in methylic alcohol is saturated with hydrochloric acid gas it loses the power of reducing Fehling's solution, and a crystallizable product is formed, having the composition $C_6H_{11}O_6C.H_3$ as the result of a reaction represented by the equation:

$$C_6H_{12}O_6+CH_3OH=C_6H_{11}O_6.CH_3+H_2O.$$

The same reaction takes place with all kinds of alcohols capable of dissolving sugar, and the compounds formed correspond to natural glucosides. They are not altered by Fehling's solution, phenylhydrazin, or boiling potash solution, but when boiled with dilute acid they assimilate water, and are converted into sugar and alcohol. Some of these artificially produced glucosides have a sweet taste and others a bitter taste. It is not improbable, therefore, that some natural glucosides may be compounds of the same kind.

Lanolin in Extinguishing Mercury.—Ernest Buch says (*Pharm. Zeit.*) that in anhydrous lanolin we possess a substance with whose help mercury can be quickly and easily extinguished for the preparation of mercurial ointment. He proposes the following formula for the preparation of mercurial ointment:

	Parts.
Mercury	1,000
Anhydrous lanolin, or wool-fat	250
Hog's lard	1,140
Mutton tallow	610

It is better to have the lanolin not too cold and hard, it is best at about the temperature of the room. All the quicksilver is operated on at once. An extinguished mercury (*Hydrargrum extinctum*) is on the market made by Dieterich 400 Gms. of which contain 334 Gms. of mercury. Such a preparation may be made using lanolin alone.

Distinctions between Catechu and Gambier.—Gibson points out how catechu from *Acacia Catechu* and that (gambier) from *Uncaria Gambier* may be distinguished by microscopic examination. Depending upon the fact that the latter is prepared from young stems bearing leaves and flowers, while the black catechu is obtained from the duramen or inner wood of the trunk, he seeks for the different anatomical elements accidentally present in the extracts. The material is dissolved by means of alkali or thirty per cent. acetic acid, and the insoluble residue is then submitted to careful examination. In that from black catechu, woody fibers and large pitted vessels may be detected, and sometimes hairs from the leaves in which the extract has been wrapped, but never any dissociated parenchymatous cells, such as are found in the residue from gambier, in which hairs from the calyx and corolla of the flower of *U. Gambier* may also be distinguished —*Répert.*

New Isomer of Cinchonine.—Jungfleisch and Légar describe a novel isomer of cinchonine, which they name *cinchonine ø*. It is obtained by continued boiling of an alcoholic solution of dibromhydrate of hydrobromocinchonine and subsequent separation from the other bases present. When slowly crystallized from ether it forms long prisms, which are insoluble in water, but freely soluble in alcohol, benzin, chloroform, acetone. The base melts at 150°, and is dextrogyre; its rotatory power, measured at 17°, being $a_D = +125°.2$. It forms a hydrochlorate and hydrobromate, which each occur as small prisms, and contain 1.5 and 2 molecules of water respectively; and an oxalate containing five molecules of water of crystallization, which forms five needles. Solutions of cinchonine ø or of its salts become colored rapidly on exposure to air and light, the brown colored products of the change being much less alkaline than the base itself (*Comp. rend.*, cxviii., 29).

Eurybin is a glucoside from the *Eurybia moschata*, a member of the family of compositæ which is found in New Zealand. Merck describes it (*Berichte*) as an amorphous, pale yellowish, bitter powder clearly soluble in water and in wine. The aqueous solution is not rendered cloudy by neutral though it is precipitated by basic lead acetate. Tannin produces a flocculent precipitate which on agitation rapidly agglomerates into a resin which after freeing from water is completely soluble in alcohol. On heating with Fehling's solution no reduction occurs. On saponification with 5 per cent. sulphuric acid a resin separates which is fully soluble in alcohol. The aqueous solution reduces Fehling's solution, an indication that eurybin is a glucoside. Dr. Kobert has conducted some experiments as to the physiological action which showed that the glucoside affected warm blooded animals when administered internally only when given in relatively large doses. 0.7 grm. administered internally to a strong cat caused repeated vomiting followed by recovery. For frogs a dose of 0.05 grammes proves toxic.

Sublimate Solutions.—Vignon points out that the antiseptic value of aqueous solutions of corrosive sublimate depends upon their preservation in an unchanged condition, and he is of opinion, after performing numerous experiments and calculations, that great changes in strength may take place on keeping, an insoluble precipitate being gradually deposited. The presence of hydrochloric acid or of alkaline chlorides retards this process considerably, and coloring matters such as indigo-carmine and fuchsine appear likewise to exert a preservative influence. Tanret, criticising these results, considers that the precipitate of mercury amidochloride is caused by ammonia vapor in the atmosphere, independent experiments having convinced him that mere exposure of aqueous sublimate solutions to the air causes no such change (*Comp.rend.*, cxvii., 793 and 1081).

Localization of Active Principles.—L. Braemer (*Comp Rend.*, cxvii., 753) has made a microchemical examination of the *Bryonia dioica, Citrullus Colocynthis, and Ecballium Elaterium* (Cucurbitaceæ), with a view to localizing the bryonin, colocynthin, and elaterin present in their tissues. The color reactions given by these compounds with sulphuric acid (pure or combined with phenol), ammonium molybdate or vanadate, and silver nitrate, were utilized for this purpose. In the case of bryony and colocynth, the material was preserved in ether, in which the respective active principles are insoluble. The reagents were not applied direct, but placed at the edge of the cover glasses over the sections and allowed to penetrate by capillary attraction. In the elements of the tissues containing the active principles the presence of the latter was clearly indicated bp a red coloration, and longitudinal sections made through the different organs of the plants showed that these elements correspond to the sieve tubes described by Fischer as having ceased to exercise their special function and lost their typical structure. In the three species examined these vessels occupied chiefly the periphery of the liber, but they were also found in the cortical parenchyma, the peric cycle, and the fundamental parenchyma.

Tests for Europhen.—The German Pharmacopœia Commission state as a test for the purity of europhen, that when europhen is agitated with water and silver nitrate added to the filtrate should not show cloudiness. According to this test all europhen would have to be refused which was not indifferent to silver nitrate solution. Dr. Felix Goldmann pointed out some two years ago, however, that europhen contains traces of free iodine, and that on contact with water water-soluble organic compounds were formed. Every sample of europhen after it had been mixed with water would, therefore (though not after, merely agitating) yield a filtrate which reacts upon silver nitrate. These are not impurities but merely substances which serve to aid in the efficacy of the product. Dr. Goldmann therefore proposes the following test: To identify europhen boil it for ten minutes in alkaline solution with zinc dust and thus split up into its components. Dilute, filter, add an excess of acid to the filtrate and agitate with ether. Estimate the iodine in the aqueous solution in the usual manner. Drive off the ether from the ethereal solution, take up with a little soda solution diluted with water and add iodine and potassium iodide solution or what is better iodine in the nascent state, potassium iodide and sodium

hypochlorite. Europhen is thus regenerated and may be identified by the precipitate that forms, greenish at first, and later yellowish, and by the characteristic odor.

Chloralose and Parachloralose.—In a supplementary communication regarding these substances (see *Pharmaceutical Record* [9], xv., 157) Hanriot and Richet describe the first named as slightly soluble in water and in ether, more so in alcohol, and melting at 187°. The aqueous solution does not reduce silver nitrate nor Fehling's solution even when boiling. Dilute acids fail to decompose it, and nascent hydrogen is also without action upon the solution, but alkalies color it brown on warming. Concentrated acids or their chlorides act upon chloralose, forming di- and tetra-substituted ethers. Tetracetyl-chloralose, $C_8H_7Cl_3O_5(C_2H_3O_2)_4$, melts at 145°; tetrabenzoyl-chloralose forms prisms which fuse at 138°. By oxidation chloralose is converted into chloralic acid, $C_7H_9Cl_3O_6$, with loss of carbon dioxide. The acid crystallizes in anhydrous needles, which fuse at 212°, are soluble in alcohol or ether, and slightly so in water. All these derivatives of chloralose are physiologically inactive. Parachloralose is distinguished from the former compound by its insolubility generally; it melts at 227°, and sublimes if heated gently. Alkalies attack it on boiling, but not powerfully. Like chloralose, it is unaffected by hydroxylamine, phenylhydrazin, and dilute acids, and it gives di- and tetra-substituted ethers under similar conditions. Tetracetyl-parachloralose, $C_8H_7Cl_3O_5(C_2H_3O_2)_4$, occurs as long needles, melting at 106°, and boiling near 250° under a pressure of 25 mm. It can be distilled at the ordinary pressure, but is colored yellow during the operation. Tetrabenzoylparachloralose has not yet been obtained in the crystalline state. By oxidation of parachloralose, parachloralic acid $C_7H_9Cl_3O_6.2H_2O$ is formed and CO_2 is given off. This acid melts at 202°, is slightly soluble in cold water and very soluble in alcohol or ether. It crystallizes in efflorescent tablets (*Comp. rend.*, cxvii., 734) *Phar. Jour.*

Lycetol.—Under this name a body, which may be represented as dimethylpiperazine tartrate, has been introduced for therapeutic use by Bayer & Co., of Elberfeld (*Apoth. Zeitung*). It is described by Hermann Wittzack in the "Allg. Medizin Central Zeitung" as having little action upon the human organism, but as having at least the same solvent action on uric acid as piperazine itself. It is stated that the administration of lycetol is followed by considerable increase of diuresis, with reduction of the specific gravity of the urine. Long continued use of this substance does not produce any disturbance of the system, but gouty symptoms are relieved by it. Thoms points out that, regarding piperazine as constituted of two ethylene residues united by two NH groups:

$$HN<\begin{matrix}CH_2 & - & CH_2\\ CH_2 & - & CH_2\end{matrix}>NH$$

or as diethylenediamine, the base in lycetol may be represented as constituted of two propylene residues united in a similar manner by two NH groups:

$$HN<\begin{matrix}CH_2 & - & CH\\ CH & - & CH_2\\ | & & \\ CH_3 & & \end{matrix}\begin{matrix}\\ \\ \\ \end{matrix}\begin{matrix}CH_3\\ |\\ CH\\ CH_2\end{matrix}>NH$$

or as dipropylenediamine, dimethylpiperazine being derived from propylene in the same manner that piperazine is derived from ethylene. Many years ago the mode of producing these diamines was shown by A. W. v. Hofmann, and the dipropylene compound has since been prepared by H. Strache according to Hofmann's method, but the yield obtained was small. The *Pharmaceutical Journal* thinks it is probable, therefore, that Bayer & Co. have found a more advantageous mode of production.

Methylamine and Ethylamine.—A new mode of preparing methylamine and ethylamine, based upon the reduction of the remarkable ammoniacal compounds of formaldehyde and acetaldehyde, is described by MM. Trillat and Fayollat in the current issue of the *Bulletin de la Société Chimique* (*Nature*). When aqueous solutions of formaldehyde and ammonia are mixed a compound is formed the decomposition of which has been given by several chemists as $N_2(CH_2)_3$. By the direct union of equal molecules of formaldehyde and ammonia the substance $CH_2 : NH$, methylene imide, is supposed to be produced, two molecules of which then combine with another molecule of formaldehyde to produce the compound in question $CH_2\begin{matrix}N : CH_2\\ N : CH_2\end{matrix}$ with elimination of a molecule of water. This substance is rapidly broken up upon treatment with zinc dust and hydrochloric acid, and subsequent addition of caustic alkali, with liberation of methylamine. It is probable that four atoms of hydrogen are taken up during the reduction, thus fully saturating the molecule and forming the compound $CH_2\begin{matrix}NH\cdot CH_3\\ NH\cdot CH_3\end{matrix}$; this latter substance then becomes converted into formaldehyde and methylamine by assimilation of water during saponification with alkali. In order to prepare methylamine it is unnecessary to isolate the ammoniacal compound; formaldehyde and ammonia are simply mixed and immediately treated with zinc dust and dilute hydrochloric acid. The liquid is then saturated with caustic alkali, and the methylamine, together with excess of ammonia, expelled by a current of steam and received in dilute hydrochloric acid. Upon evaporation of the acid solution a mixture of sal-ammoniac and methylamine hydrochloride is left, and the latter may readily be extracted by absolute alcohol. A second distillation of the methylamine hydrochloride with caustic alkali yields pure methylamine. Ethylamine may be similarly prepared by reduction and saponification of the well-known compound of acetaldehyde and ammonia.

Adulteration in Canada.—A bulletin has been issued by the Inland Revenue Department of the Canadian Government dealing with analysis of pharmaceutical tinctures.

Mr. MacFarlane, chief analyst, says that a considerable number of samples were found to be deficient in alcoholic strength, and it is reasonable to suppose that, as a consequence, they are defective as regards the extract they should contain and the medicinal properties they should possess. According to the Adulteration Act every drug must be regarded as adulterated within the meaning of the Act, "if, when sold, or when offered, or exposed for sale, under or by a name recognized in the British or United States Pharmacopœia, it differs from the standard of strength, quality or purity laid down therein." The following statement shows the number of cases challenged, and the manner in which they have been disposed of up to the present.

	In Quebec.	In Montreal.	In Ottawa.	In Toronto	Total.
Challenged	5	7	6	9	27
Relieved on appeal	1	..	4	1	6
Relieved on payment of expenses	4	5	..	5	14
Settled on payment of these and the expenses of prosecution	..	..	2	1	3
Non-suited	..	1	..	..	1
Judgment obtained	..	..	..	2	2
Still in litigation	..	1	..	..	1
Totals	5	7	6	9	27

A Test for Europhen.—This recently introduced synthetic remedy can be detected by reduction by means of zinc dust, which liberates iodine. The mass is treated with water and filtered; and excess of acid added. It is then shaken with ether. The ethereal solution can now be dried, the residue redissolved in water and treated with nascent iodine (KI and Cl), when europhen is regenerated.—*Pharm. Zeitung.*

Formalin.—A report of great novelty and interest on the efficacy of this new disinfectant has just been published by Dr. Schmidt, (*Pharm. Zeitung*). The lines on which the work embodied has been undertaken are purely scientific, and of such a character as to insure its real value, although it emanates from the firm interested in the sale of the disinfectant The action of formic aldehyde, the chief constituent of formalin, on the various offensive fæcal principles has been carefully studied, with the following results:

1. Sulphureted hydrogen.

$$CH_2O + H_2S = CH_2\begin{matrix}SH\\ OH\end{matrix}$$

The thio-alcohol produced, however, has a mercaptan-like odor, hence it is better to employ excess of formic aldehyde, when the following reaction takes place:

$$CH_2\begin{matrix}SH\\ +\\ OH\end{matrix}CH_2.O = CH_2\begin{matrix}S\\ OHNO\end{matrix}CH_2$$

The new body has very little odor.

2. Methyl mercaptan. The smell of fæces is, according to Nencki and Sieber, largely due to this sulphur compound. The following reaction takes place:

$$CH_3.SH + CH_2.O = CH_3.SCH_2\,OH$$

3. With ammonia and basic compounds formic aldehyde at once forms odorless compounds. Dr. C. Gegner some months ago pointed out that not only do formalin solutions exercise a bactericidal action, but formalin vapor is powerfully antiseptic and affects the melting of gelatin exposed to it. Dr. G. Hauser, referring to this communication, shows that such gelatin cannot be liquefied, even by the heat of a bunsen flame or on boiling in soda solution. Being strongly antiseptic, too, no organisms will grow upon it. He takes advantage of these peculiarities in preparing colonies of bacteria for microscopic examination. A thin film of gelatin, in which a particular growth is present, is placed on a glass slide, covered with thin glass, and the cover sealed by a ring of melted gelatin. The preparation is then exposed to formalin vapor for twenty-four hours, after which the gelatin is quite solid and unalterable. By previously immersing the gelatin film in week aqueous fuchsine solution, the bacteria are stained sufficiently to contrast with the surrounding medium, which is much more faintly colored.—*Pharm. Jour.*

Formula for Making and Coating Glycerin Suppositories.

By C. S. BONDURANT.

Sodium carbonate crystal	1 part
Stearic acid (dry)	2 parts
Glycerin	32 parts

Powder sodium carbonate and stearic acid finely, mix with the glycerin in evaporating dish, place on a water bath, and continue heat until effervescence ceases and complete solution is effected.

Pour into cold, dry molds, and, when congealed, cut off, and insert into one end a long needle, dip quickly into melted paraffin for an instant, cool quickly, take out the needle, stop the hole by gentle pressure, keep in glass-stoppered bottles.

The Tests for Chloroform.*

BY D. B. DOTT, F.I.C., F.R.S.E.

In view of the fact which has recently been authoritatively announced, that a new pharmacopœia is to be produced before long, it seems an appropriate time to bring forward anything one has to say on the above subject. Although no discoveries of any importance regarding chloroform have been made since the compilation of the last pharmacopœia, there will be a general censensus of opinion that the characters and tests require some revision.

First, as to specific gravity. From my own experience, and from a series of experiments lately tried in the laboratory, I am clearly of opinion that the specific gravity should be reduced. This opinion is in harmony with the results obtained by Biltz and Schacht.† It is also the opinion of Dr. Squibb, who has given great attention to the matter, and was the first to observe the restraining influence of alcohol on the decomposition of chloroform. Dr. Squibb maintains‡ that chloroform should not have a higher density than 1.494, and preferably that it should be 1.490. Chloroform which has been reduced to sp. gr. 1.490 will resist decomposition better than chloroform of 1.497 sp. gr. Chloroform of 1.497 may resist decomposition when kept with all known precautions, but experience does not justify the belief that the users of chloroform can be relied on to adopt these precautions. And if a lower specific gravity is desirable in this country, it is even more desirable in tropical regions, and that is an important point to be considered in drawing up an Imperial Pharmacopœia. The specific gravity had best be stated as of 1.490 to 1.495. That allows a reasonable margin of variation, a custom which should be as a rule adopted both in stating percentages and densities. It would be more satisfactory both to manufacturers and analysts.

Secondly, as to the color yielded to sulphuric acid. The purpose of this test is a good one, but it must always be used with discrimination, because, as formerly pointed out, the coloration may be due simply to a trace of oil derived from luting, or to resin dissolved out of the cork.

Thirdly, as to a test for carbonyl chloride, etc., in other words, a test to show whether chloroform has undergone appreciable decomposition. Although it has been well known for many years that chloroform is, under certain conditions, liable to decomposition, and that the fact of its having decomposed can be easily ascertained by tests, it so happens that there is no such test in the present pharmacopœia. It seems to have been pretty well ascertained that the chief products of decomposition are carboynl chloride, hydrochloric acid, and chlorine, although there is also secondary reaction on the alcohol present, giving rise to ethyl chloride and other compounds. The tests I have employed to detect decomposition in chloroform are moist litmus paper and solution of silver nitrate. I do not think there is the least question that these are the best and most satisfactory tests. I have not found baryta water at all so satisfactory. A trace of carbonic acid will cause a minute precipitate, which it would be very rash to conclude was due to carbonyl chloride, and altogether the test is more open to misconception, and of course does not react with hydrochloric acid or chlorine. There does not appear to be any advantage in introducing a test specially for the purpose of detecting free chlorine. I have not determined the limit of delicacy of the silver nitrate reaction, but the following experiment may be regarded as practically conclusive. One volume of decomposed chloroform was diluted to 100 volumes with pure chloroform, which gave no reaction with silver nitrate. The mixture was then shaken up with nitrate of silver solution and gave at once a well marked turbidity. I would therefore suggest that the tests for chloroform might be as follows:

CHARACTERS AND TESTS.

A dense liquid of characteristic odor. Specific gravity 1 490 to 1.495. On allowing ½ fl. drm. to evaporate from a clean surface, no foreign odor is perceptible at any stage of the evaporation. When 1 fl. drm. is agitated with an equal volume of solution of silver nitrate, no precipitate or turbidity is produced after standing for five minutes. On shaking up the chloroform with half its volume of distilled water, the water should not redden litmus paper. When shaken with an equal volume of sulphuric acid, little or no color should be imparted to the acid.

* Read before the Edinburgh branch of the British Pharmaceutical Society.

† *Pharm. Journ.* (3), xxiii., 1,005.

‡ *Pharm. Journ.* (3), xxiv., 92.

Experiments with Liquid Air.

Professor Dewar, of London, has delivered another of his interesting lectures on liquid air.

To the majority of people liquid air is only a scientific marvel, to a few it presents a collection of unsolved and most interesting problems, while at the Royal Institution it has become a valuable instrument of physical research. Produced in large quantities and stored by novel and ingenious methods, it is employed in the study of matter at 200° below zero, exactly as a spirit lamp or a gas flame is used in studying the properties of different bodies at temperatures equally removed in the opposite direction from the normal. Professor Dewar's lecture dealt in part with some properties of the liquid itself which has not previously been studied in equally favorable conditions, but was more particularly concerned with indicating the various important applications of a new and potent instrument of physical investigation.

Professor Dewar carried out a very simple but very striking experiment which forcibly demonstrates the truth of the molecular theory. He took a high vacuum bulb containing only a minute quantity of mercurial vapor, to which was connected by a short neck of from a tenth to an eighth of an inch bore a smaller bulb containing liquid mercury. On applying liquid air to a portion of the larger bulb, the contained vapor was at once condensed as a small mirror. On applying the liquid to a second portion of the glass no further condensation was obtained thus proving that the metallic surface a couple of inches below could not supply vapor to replenish the larger bulb. But on inclining the apparatus so as to pass a globule of mercury into the larger bulb itself the cold spots on the glass were instantaneously covered with dense metallic deposits. Of the myriads of molecules projected in all directions from the liquid mercury in the smaller bulb only a small percentage—which might be determined by the theory of probabilities—struck the orifice of the neck in such a way as to shoot clean through into the larger bulb. Hence the loss from condensation could not be made good although there was free communication with another chamber containing vapor at a relatively high pressure.

Incompatibility.*

JAMES KENNEDY, PH.G., M D.

Professor of Pharmacy, University of Texas.

By the term incompatibility we mean that property possessed by certain bodies which renders them uncongenial to certain other bodies, and occasions a change in either one or both substances affecting either their physical or chemical constitution when brought into contact with each other. This definition applies to chemical and physical incompatibility.

We may study our subject under four different heads, as follows: 1. chemical; 2. physical; 3. pharmaceutical; 4. physiological.

Chemical Incompatibility.—Substances are said to be chemically incompatible when they react upon each other in such a way as to produce a new compound occasioning changes in the atomic structure of both. Acids and alkalies are incompatible, for the reason that there exists an affinity between them sufficiently strong to cause them to unite chemically. Their atoms enter into a close chemical union, and produce a new substance which possesses properties differing widely from either of its constituents.

If common bread soda (soda bicarbonate) is added to muriatic acid, we will find that the mixture will effervesce, owing to the escape of carbonic acid gas (CO_2). The resulting solution no longer possesses the characteristics of either the acid or the soda, and by evaporation of the solution we obtain the product of their union, which is common salt. The muriatic (hydrochloric) acid being composed of hydrogen and chlorine (HC_1), the soda of sodium, and carbonic acid (CO_2) (having the composition of Na_2CO_3), double decomposition ensues, the sodium (Na) uniting with the chlorine (Cl) to form sodium chloride (NaCl), the hydrogen with a part of the oxygen to form water (H_2O), and the carbonic acid gas escapes (CO_2).

Another instance of chemical incompatibility, and one which will serve to illustrate the importance of a knowledge of the subject to both pharmacist and physician, is the changes occurring on the admixture of calomel (mercurous chloride) (HgCl) with muriatic acid. The acid nearly always containing free chlorine, the mercurous chloride takes up another atom of chlorine from the acid, and is converted into mercuric chloride, or corrosive sublimate, a compound differing greatly from calomel, both in its chemical constitution and physiological effect, the

* Lecture delivered before the medical and pharmaceutical students of the University of Texas and communicated by the author.

former being a relatively harmless cholagogue, while the latter is a powerful alterative in small doses, and a violent corrosive poison when taken in large amounts. * * * *

Among the common errors that physicians make as pertains to compatibility in prescriptions are the following: Ammoninm carbonate with syrup of squill in cough mixtures. These two substances are incompatible, for the reason that the syrup contains an acid (acetic) which acts chemically upon the ammonium salt, decomposing it with the formation of ammonia acetate. Tannic acid is sometimes prescribed in combination with tincture chloride of iron with the view of increasing the astringency of the mixture. The result is that an inky mixture is formed by the union of the tannic acid with the iron, which, in addition to producing an unsightly preparation, possesses less astringent power than was formerly possessed by either one of the constituents of the prescription. The same result will obtain if we combine preparations of iron with fluid extracts or tinctures containing tannin. Most vegetable substances contain tannin in greater or lesser amounts; therefore, if it is desired that iron should be combined with the active principle of the plant, the vegetable preparation should first be detannated; that is, have its tannin removed by the process of precipitation with the white of an egg. The tannin combines with this form of albumen and produces an insoluble compound which may be separated by filtration, leaving the liquid entirely free from its presence. The iron may then be added without producing any discoloration. There are a few drugs, such as gentian, calumba and capsicum, which do not contain any tannin, and may be combined with the salts or iron without producing any discoloration.

Iodide of potassium is frequently prescribed in solutions containing spirit of nitrous ether, and in the majority of instances a discoloration of the mixture results in a short time. This discoloration will not occur if the nitrous ether is perfectly fresh and pure. If, however, a slight decomposition has resulted, and owing to the facility with which decomposition occurs in this compound when exposed to light and air the preparation is seldom found pure on the apothecary's shelf, and may be safely set down as not being a good thing to prescribe in this form of combination. The discoloration which is produced is due to free iodine, resulting from the decomposition of the potassium iodide by acetic acid contained in the nitrous ether as a product of its decomposition under the influence of light and air.

Nitrous ether is often prescribed in combination with antipyrine, but these substances are incompatible in a high degree The speaker was the first to call attention to the incompatibility of these substances, and in a paper which appeared in THE PHARMACEUTICAL RECORD, of New York, he published his researches on this subject. In a later and more exhaustive research conducted by him on antipyrine the resulting compound was studied both chemically and physiologically (see proceedings of Texas State Pharmaceutical Association, 1889), and the influence of the changes in the substances due to the chemical decomposition as affecting their medicinal value was determined. The conclusions were to the effect that the new compound formed is not poisonous, and practically inert; that both the spirits of niter and antipyrine have their medicinal value lessened in proportion to the amount of each suffering decomposition. A mixture of antipyrine and nitrous ether will deposit green crystals if allowed to stand, providing there is not sufficient water present to keep the new substance in solution.

Acetate of lead and sulphate of zinc are frequently ordered in combination for use in the treatment of inflammatory affections of the genital mucous membranes, under the impression that the constringing power of these drugs is enhanced by so doing. This is a mistake. Double decomposition occurs when these two salts are dissolved together; sulphate of lead is precipitated as an inert substance, while the acetic acid is transferred to the zinc to form zinc acetate.

Strychnine is sometimes prescribed in combination with the bromides or iodides. This is a dangerous practice, for the reason that if the mixture has been allowed to stand for some time the bromide or iodide of strychnine will crystallize and be deposited in the bottom of the vial, and as the last dose of the medicine is taken the greater portion of this powerful drug contained may be swallowed, and perhaps with fatal results.

Illustrations of chemical incompatibility might be multiplied *ad infinitum*.

The following rules should be borne in mind:

Acids should never be prescribed with alkalies or their carbonates.

Alkaloids should never be prescribed in combination with alkaline carbonates.

Salts of the alkaline earths, *i.e.*, magnesium, calcium, barium and strontium, should not be prescribed with soluble carbonates, tartrates or oxalates and in the case of the three latter elements they should never be combined with soluble sulphates, phosphates, arsenates, phosphoric or sulphuric acids.

The heavy metals, such as iron, manganese, lead, mercury, silver and zinc, should never be prescribed in conjunction with the alkalies, their carbonates or oxalates.

Silver should never be prescribed in combination with chlorides, bromides, iodides or hydrochloric acid or organic matter (substances of vegetable or animal origin).

The soluble salts of lead should never be combined with chlorides, hydrochloric, hydrobromic, hydriodic or sulphuric acid

It is impossible to tabulate in a lecture of this kind the various incompatible combinations and mixtures, nor would such a tabulation be of any considerable use to either physician or pharmacist. An intimate knowledge of the chemical nature of the substances dealt with is the only infallible guide, the only beacon that can be relied upon to guide us safely past the treacherous shoals of this formidable gulf.

Physical Incompatibility.—By physical incompatibility we mean that property possessed by certain substances which causes them to change their physical properties when brought in contact with each other without affecting their chemical composition, a quality that in many instances may be overcome by the exercise of pharmaceutical skill. For instance, oils are physically incompatible with water (because of a lack of adhesion) and aqueous mixtures, but by the intervention of some viscid substance, *i e.*, gum acacia, they may be rendered miscible in all proportions. Solutions of resinous drugs are physically incompatible with aqueous solutions, but by the intervention of some saccharine or mucilaginous material many resins may be rendered quite homogeneous.

Pharmaceutical Incompatibility is represented by that class of substance which by virtue of possessing some property or properties that occasion an undesirable change when brought in contact with each other, and which cannot be overcome or prevented by the exercise of pharmaceutical skill. Of course, in this class of incompatibles we may have the occurrence of either physical or chemical change; for instance, when two or more salts are ordered in powders, and the water of crystallization of one is absorbed by the other, with the effect of liquefying the powder. Strongly alcoholic solutions are incompatible with syrups, for the reason that the sugar is very much less soluble in such media, and in the course of several hours a considerable proportion will be found deposited in the bottom of the bottle, making a very unsightly mixture.

A prescription may be said to be pharmaceutically incompatible when an amount of a given salt which is in excess of its solubility is ordered dissolved in the liquid.

Physiological incompatibility is the property possessed by one medical substance of neutralizing the therapeutic effect of some other remedy. Medicines possessing this property should never be ordered in combination.

In conclusion, gentlemen, I will state that I have not told you all that you should know concerning this very important subject, but I hope the suggestions which I have given may be fixed upon your memory by the illustrations you have seen this morning, and will incite you to a more exhaustive study of the subject.

When the physician has learned to write compatible prescriptions, and the pharmacist has so mastered his calling that he can dispense the same in a reliable, palatable and sightly form, then will the occasion for mutual criticism have disappeared and given place to mutual respect.

Interchange of State Certificates.*

An ably written article some time ago appeared in THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD from my colleague, H. R. Slack, of Georgia, in which he justly criticised the action of some State boards for the refusal to exchange certificates of registration with sister boards, on the plan suggested by the secretaries' meeting held in New Orleans.

Immediately after said meeting the Missouri Board resolved to accept these suggestions, and has since recognized certificates of every board which reciprocates this courtesy on that plan.

The experience I had, however, with a licentiate of a board that, as it claims, is not permitted to exchange, I will relate below. In the earlier part of September last a Mr. S —— presented his certificate, granted by one of the New England States, *upon examination*, and requested our "interchange" by virtue thereof. I informed him that a written testimony of the secretary of the —— board was required, stating the percentage he obtained, and if this was not less than 65, his request would be complied with. This testimony was not produced in due time, and Mr. S —— appeared for examination at the meeting of the Missouri Board, October 9. The following are his written answers to part of the ten questions submitted to him:

Question—Write in full the meaning of the following abbreviations: Ad.; answer, *add.* 1. a., answer ——; consp.; answer,

* Letter of F. W. Sennewald, Secretary of the Missouri Pharmacy Board, in *National Druggist*.

Tere., answer, *3 times.* Q. L.; answer, *¼ pound.* Haust.; answer, *¼ pound.*

Question—How is crude spirits or high wine deprived of the fusil oil it contains? Answer—*By placing in them a salt whose affinity for water is great, a lime and heating in a receptacle suitable for volatile liquids, melting the residue and distilling.*

Question—What is maltum? Answer—*It is an exudation from the malt tree. Vinum maltum is the officinal preparation*

Of the *five* crude drugs submitted to him for identification he recognized buchu leaves only; did not know santonica, and pronounced senega to be licorice root, anthemis to be arnica flowers, and salvia (impressed) to be mullein. Of the five officinal galenical preparations) he identified Fowler's solution; knew not syr. ferri iodid.; pronounced syr. rhei. arom. to be confection of senna; tinct. benzoes to be tincture arnica, and tinct. cinchon. comp. to be comp. tinct. cardamom.

Of the five chemicals shown him, and which were sodii carbon. cryst., potass. nitras. cryst., acid benzoic (ex gum.), ammon. chlorid. gran. and potass. ferrocyan. cryst., he recognized none.

Of course his registration was refused. A few days later I received the statement of the secretary of the —— board, who testified, under seal of his board, that Mr. S—— had passed his examination with a percentage of 76. I was also informed that the pharmacy law of the State of —— did not permit an exchange of certificates.

The Missouri board grants a certificate if the examinee answers 60 per cent. of all the questions propounded to him correctly and exhaustively. These questions are such as may occur in the daily work of every pharmacist; practical, not unduly scientific or misleading; and so formulated that by the answers given thereto the examiners may easily form judgment whether or not they can conscientiously issue the certificate, on which they vouch with their signatures for the ability and competency of the holder. Now, how it was possible that Mr. S — passed the —— board with the high percentage of 76, and at our examination fell short considerably of the required 60, I am unable to explain.

I hold that it is the task of the State Pharmacy Boards to protect the people against ignorant and incompetent compounders and venders of medicine, and to accomplish this it is their sacred duty to make a thorough inquiry as to whether the examinee has the requisite knowledge of pharmacognosy, toxicology, doses, pharmaceutical chemistry, reading of prescriptions, weights and measures, and is familiar with the Pharmacopœia. If he possesses these requirements he deserves a certificate; otherwise, not.

I am highly in favor of a thorough college education, and consider chemistry of great importance in our profession. yet without a "good stock" of knowledge of the other branches, named above, and a practical experience of at least three years behind the counter, a competent pharmacist is an impossibility. It cannot be reasonably expected that in our comparatively young country an otherwise qualified and able pharmacist be, at the same time, an analytical chemist, who can recite to you the complex formulas of quinine, amyl-nitrite, tartaric acid, etc., nor an expert botanist, who can remember by heart the nat. ord. in which hydrastis, ipecac, illicium, etc., are classified. To the professors and tutors of chemistry and botany, this may be of importance; to the dispensing pharmacist it is valueless to remember, and questions of this kind are superfluous, and ought therefore not to be propounded.

I cannot help smiling at the "*high falutting*" examination questions, published from time to time in our journals, calculated and intended to give the respective Board the dignity of highest standing and requirements; but I verily believe that by far the majority of the members of these same Boards could not answer their own questions in a satisfactory manner *without the aid of books.*

In my opinion, the public and our profession would be served far better if the examiners would lay more stress upon practical pharmacy and less upon theoretical.

Granular Effervescent Preparations.*

By Augustus Bradley.

This form of medication is a most pleasing one for the exhibition of many nauseous and disagreeable medicines and those remedies where the assistance of the sedative action of carbonic acid is desired.

Not many years ago the effervescent draft was considered indispensable, but at present it has comparatively fallen into an unmerited oblivion.

It is, however, again making its appearance in such localties where it is extensively advertised.

The efficacy of these preparations, as a class, depends principally upon the amount of available carbonic acid gas contained therein. The worthless (non-effervescent) stock upon our shelves, in main, prompted me to devise a scheme whereby they could be supplied by the pharmacist fresh on a short notice.

MODE OF PREPARING.

I propose in this paper to relate a few experiments, with results, also giving methods and formulas, with an apparatus of my own get-up, whereby the retail pharmacist can prepare his own granular effervescent preparations, and not be dependent upon the wholesale manufacturer as heretofore. These preparations are made by causing a mixture of powdered ingredients, consisting of sodium bicarbonate, tartaric or citric acids, sometimes both, and the medicament to become sufficiently moistened, as when in such pasty condition, rubbed through a coarse sieve and dried, granules are produced.

Each article should be separately powdered and dried before mixing, the citric acid to be added last and rubbed in quickly.

The drying apparatus should be previously heated for the reception of the moist granules. The proper pasty consistence of the mixture is only ascertained through practice, some mixtures requiring more of the moistening agent than others

SELECTION OF A MOISTENING AGENT.

The selection of a cheap moistening agent seems to me to be an item of great importance, especially when large quantities are to be made.

Samples are prepared with ether, amylic alcohol, chloroform, live steam, syrup, carbon disulphide, etc., but with each too great a loss of carbon dioxide resulted during manipulation to encourage the use of any.

Water or moisture being the prime cause of this loss, I concluded that if a liquid containing no water at all be used granules could be made without any loss of gas.

I was aware that absolute alcohol contained practicallyno water, but also that, if it answered from this standpoint, its expensiveness would discourage its use. However, a small quantity of a mixture was tried, but owing to the hygroscopic properties of this alcohol the experiment proved a failure. In a few minutes after the granules had been removed to be dried, decomposition took place, resulting in an adherence and puffing up of the granules, showing too great a loss of gas.

Purified benzin was next tried, but owing to the disagreeable taste, odor, and too easily crushed condition of the dried product, it was abandoned.

Benzin, with different percentages of absolute alcohol resulted likewise.

After numerous experiments I found 95 per cent. (by volume) ethylic alcohol, as recommended by the National Formulary, to be the best agent for general use.

SIEVES.

I use four copper-wire sieves Nos. 6, 20, 40 and 60, No. 6 to pass the pasty mass through the glass shelf, No. 20 to separate the dried granules from the dust (some manufacturers, to prevent any loss, do not separate it). Nos. 40 and 60 are used for thoroughly mixing the different ingredients.

I like the copper-wire sieves the best, owing to their less liability of being attacked by corrosive agents.

The temperature of the drying apparatus, with but a few exceptions, should always be constant, taking care not to allow it to go above 158 degrees F., for fear of converting the sodium bicarbonate back into the carbonate, through the loss of carbon dioxide, and also the formation of caramel in those preparations containing sugar with tartaric acid.

LOSS IN WEIGHT.

The loss in weight encountered in drying the following articles as found in commerce, are:

Citric acid, 8 to 10 per cent.

Sodium bicarbonate, 2 to 3 per cent.

Tartaric acid, 1-500 per cent.

The use of tartaric acid alone, as recommended by the National Formulary, leaves the granules too soft. An addition of citric acid will give them firmness, and render their taste more acceptable to the majority of people.

There is no class of preparations that require such special care as these. The absence of moisture is absolutely essential, therefore the bottles should be thoroughly dried and hermetically sealed immediately after being filled. Those composed of iron, pepsin and their compounds should be stored in amber or blue glass bottles.

I will submit a few formulas, which I have compiled and am using, most of which, in course of preparation require some special precautions, which will, however, present themselves to the operator upon his first attempt.

1. GRANULAR EFFERVESCENT CAFFEINE CITRATE.

Caffeine citrate	20 grains
Sodium bicarbonate	600 grains
Citric acid	300 grains
Tartaric acid	210 grains
Powdered sugar	870 grains

2. GRANULAR EFFERVESCENT CAFFEINE CITRATE AND PHENACETIN.

Caffeine citrate	20 grains
Phenacetin	100 grains
Sodium bicarbonate	600 grains
Citric acid	300 grains
Tartaric acid	240 grains
Powdered sugar	620 grains

* From a paper read before the North Carolina Pharmaceutical Association.

3. GRANULAR EFFERVESCENT POTASSIUM BROMIDE.

Potassium bromide	½ troy oz.
Sodium bicarbonate	3¾ troy oz.
Tartaric acid	1¼ troy oz.
Citric acid	2 troy oz.

4. GRANULAR EFFERVESCENT CAFFEINE CITRATE AND POTASSIUM BROMIDE.

Caffeine citrate	50 grains
Potassium bromide	½ troy oz.
Sodium bicarbonate	3¾ troy oz.
Tartaric acid	1¼ troy oz.
Citric acid	2 troy oz.

5. GRANULAR EFFERVESCENT MAGNESIUM SULPHATE.

Dried magnesium sulphate	400 grains
Tartaric acid	300 grains
Citric acid	240 grains
Powdered sugar	460 grains
Sodium bicarbonate	600 grains

This is practically identical with the granular effervescent magnesium citrate on the market.

6. GRANULAR EFFERVESCENT VICHY SALT.

Potassium bicarbonate	45 grains
Sodium bicarbonate	5 troy oz.
Magnesium sulphate	45 grains
Sodium carbonate	5 troy oz.
Tartaric acid	1⅛ troy oz.
Citric acid	2 troy oz.

7. GRANULAR EFFERVESCENT PEPSIN.

Pure powdered pepsin	50 grains
Citric acid	1¾ troy oz.
Tartaric acid	1⅛ troy oz.
Powdered sugar	½ troy oz.
Sodium bicarbonate	3¾ troy oz.

8. GRANULAR EFFERVESCENT PEPSIN AND BISMUTH.

Pure powdered pepsin	50 grains
Bismuth and ammonium citrate	50 grains
Citric acid	1¾ troy oz.
Tartaric acid	1½ troy oz.
Powdered sugar	½ troy oz.
Sodium bicarbonate	3¾ troy oz.

I am reliably informed that these preparations are not much used in the Southern States. This is no doubt due to the want of push and advertising by those houses making specialties of them.

By calling the physicians' attention to them and furnishing a few samples, I do not hesitate to say that this most pleasing form of medication will be revived.

The Nomenclature of the Chemicals in the Pharmacopœia of the United States.*

THE AMERICAN DRUGGIST AND PHARMACEUTICAL RECORD has brought on an interesting discussion of the English nomenclature of chemicals introduced in the new Pharmacopœia of the United States.

Professor Attfield, whose name is a household word among American as well as British pharmacists, and who had occasion to write a letter some time ago to the editor of that journal, expressed himself as follows:

"I had understood that the names or headings of the monographs of the U. S. P. would not be altered (*magnesii sulphas*, sulphate of magnesium, for example), and, indeed, the actual heading or title (*magnesii sulphas*) has not been changed. But the English rendering—I cannot call it translation—of the title has been turned around so as to harmonize with the practice of the majority of modern chemical authors. Thus, for example, *it is no longer sulphate of magnesium but magnesium sulphate.* From the literary point of view it is awkward, if not solicistical, for the Latin heading to express one name and the English immediately under to express another name; nevertheless I think that the compilers were wise as well as politic in making—what the majority of mankind so dearly love—a compromise. They might with the British have continued to give such names as *magnesii sulphas*, sulphate of magnesium, or with the German have given *magnesium sulphuricum*, magnesium sulphate. They have steered a middle course, preliminary, doubtless, to an abandonment of the Latin channel altogether."

Comments upon these comments were invited by the editor of THE AMERICAN DRUGGIST, and several prominent pharmacists responded, whose opinions are given in the number published under date of Nov. 23, 1893.

An editorial paragraph introducing the communications, says that Prof. Attfield called attention to "the *incongruity* of the chemical nomenclature of the new U. S. Pharmacopœia in having the Latin title and the English *synonym* in different *cases* instead of [giving] a translation of the Latin, which would be "sulphate of magnesium." Professor Attfield holds that, if it be considered advisable to follow the newer methods of nomenclature, this could be done by following the example of the Germans, who say *magnesium sulphuricum*, magnesium sulphate."

We hardly think Prof. Attfield's comments have been correctly represented by the editor and by some of the correspondents Prof. Attfield does not use the word "incongruity," and his objection is distinctly referred to the literary aspect of the case. Neither does he recommend the adoption of the German Latinic titles "if it be considered advisable to follow the newer methods," but he simply mentions the fact that the American pharmacopœial revisers *might* have either adopted the English plan or the German plan, but for some reason of their own "steered a middle course," which Prof. Attfield surmises to be preliminary to the abandonment of the Latin altogether. In fact, he thinks the compromise "wise" and "politic," and he nowhere says that the English name *must* be a translation of the Latin, although, "from a literary point of view," the English name (not "synonym") ought to be *constructed on the same principle* that underlies the construction of the Latin, and as nearly like it in form as practicable. He is certainly not guilty of saying that "magnesium sulphate," is a literal translation of *magnesium sulphuricum*. Again, I cannot find that Prof. Attfield is at all opposed to the adoption of the modern English chemical nomenclature.

Both *titles*, latinic and English, are in the nominative case, though *one of the words* composing the latinic title is of necessity in the genitive, while one of the words in the English title must be regarded as in fact an adjective.

Dr. Charles Rice, in his customary clear and careful style, calls attention to the fact that a correct Latin grammatical equivalent of "magnesium sulphate" is the latinic title *magnesicus sulphus*, for the English title "magnesium sulphate" may well be rendered *magnesic sulphate*. He also says, correctly, that *magnesium sulphuricum*, literally translated, cannot be rendered "magnesium sulphate;" in fact it would become *sulphuric magnesium* were it literally translated.

Two of the commentators pronounce the idea of the abandonment of Latin nomenclature as "too absurd for consideration."

It is not probable that the latinic titles of the Pharmacopœia will be abandoned for many years; but those who dismiss that suggestion with the declaration that it is "too absurd for consideration" probably intended to say simply that a *technical nomenclature* is indispensable—not necessarily a Latin nomenclature, for the technical nomenclature might well be English. In No. 3, Vol. 2, of *The Apothecary*, the writer has shown that all the 997 titles in the Pharmacopœia of the United States (1880) are made up of 457 words, of which only 153 are of Latin origin, and that a majority of these 153 words derived from Latin are not really Latin words but coined latinic technical terms derived from Latin roots. The other 304 words which go to make up the so-called "Latin nomenclature" of the Pharmacopœia are not more Latin than the names "snake root" and "Devil's toe nails." All the Latin attaching to most of the latinic pharmacopœial titles is their form or appearance, which is imparted to them artificially by means of latinic endings.

Distinction must be made between Latin and latinic titles, between latinic forms and technical nomenclature. The title *magnesii sulphas* is not Latin; it is simply a technical title in latinic form. The English form of the same technical title is "sulphate of magnesium." The present English technical title, "magnesium sulphate," would, in its latinic form, become *magnesicus sulphas*.

Even if the so-called "Latin nomenclature" should some day be abolished and forgotten, there is no danger that we will go back to the use of such terms as "snake root" and "Devil's toe nails." The English titles employed in our Pharmacopœia are *not* "synonyms," as some of the writers in THE AMERICAN DRUGGIST express it, and they are gradually becoming more and more technical. The English names, "dandelion," "deadly nightshade," "henbane," "fox-glove," "squirting cucumber," "broom tops," etc., which we used to have in the Pharmacopœia, have given place to technical English titles, such as taraxacum, belladonna, hyoscyamus, etc. The remaining untechnical English titles will doubtless be reduced in number as rapidly as possible until there shall not be any English *title* left that is not technical, except for such innocent substances (medicinally considered) as water, alcohol, sugar, starch, etc. The name "corrosive sublimate" is not an English *title* in our Pharmacopœia, but only a *synonym*.

There are three principal methods of constructing latinic titles for chemicals, and only three. All of them are incidentally exemplified in the communications commenting upon Prof. Attfield's interesting note. One of these three systems is represented by the title *magnesii sulphas* used in the Pharmacopœias of Great Britain and the United States; the form *magnesium sulphuricum* belongs to a second system used in the German Pharmacopœia; the third system is represented in *sulphas magnesicus*, and is employed in the French, Spanish, Scandinavian, and other Pharmacopœias. In 1880 I presented a paper to the American Pharmaceutical Association, in which I suggested that this system (of the French and Scandinavian Pharmacopœias) be adopted with the modification that the adjective precede the noun, reversing the "sulphas magnesicus" and making it *magnesicus sulphas*.

As each of the writers who contributed their views to THE AMERICAN DRUGGIST approve of the adoption of the new English titles for the chemicals in our Pharmacopœia—such titles as "silver nitrate" instead of nitrate of silver, "potassium iodide" instead of iodide of potassium, "ferrous sulphate" instead of sulphate of iron, "ferric sulphate" instead of tersulphate of iron, "mercurous chloride" and "mercuric chloride," etc., instead of the old style English names, it is not likely that they would favor a return to the names which have just been discarded. But if we continue to say "ferrous sulphate," why not make the latinic title *ferrosus sulphas* to correspond; if we say "ferric sulphate" why not *ferricus sulphas* also; if "mercuric iodide," why not *mercuricum iodidum;* if "mercurous chloride," why not *mercurosum chloridum?* Some day these things will happen, and it will not be a bad thing if

*Oscar Oldberg in *The Apothecary* for January.

our Pharmacopœia can be perfected "from the literary point of view" as well as from the standpoint of scientific correctness and utility. The "innovation" in the English chemical nomenclature of the new Pharmacopœia is a distinct step forward.

Tobaccos.*

By H. B. Cox.

HISTORY.

It has been said that the name tobacco was given to the plant by the Spaniards, because it was first observed by them at Tobasco or Tobaco, a province of Yucatan, in Mexico. Others derive the name from the "tabac," an instrument used by the natives of America in smoking this herb.

The use of tobacco for smoking and chewing purposes is supposed to have been commenced by the North American Indians at a very early period, so early, in fact, that nobody seems to have any idea as to when that period was. It is said that the Spaniards became acquainted with tobacco when they landed in Cuba in 1492, and on their return introduced it into Europe, strongly recommending it for its valuable medicinal properties, about which they probably knew nothing at all.

The custom of inhaling the smoke was learnt from the Indians, and by the end of the 16th century had become generally known throughout Spain and Portugal, whence it passed into the rest of Europe, and into Turkey, Egypt, and India, although severely opposed and forbidden both by the Christian and Mahommedan governments. Tobacco was introduced into China during the 16th century, although its use was strongly prohibited.

It was not till the middle of the 16th century that tobacco was seen growing in Europe, first at Lisbon, when the French Ambassador, Jean Nicot (hence the name Nicotiana) sent seeds to France in 1560, as those of a valuable medicinal plant, which was, even then, diffused throughout Portugal.

When America was first discovered, and afterward when fresh tracts of the country were explored, the practice of smoking tobacco was found to be prevalent among all the tribes. Tobacco was introduced into Italy in 1560, this being about the same time as its introduction into France. Tobacco was probably first brought into this country in 1565 by Sir John Hawkins, or, at any rate, it seems unlikely that Sir Francis Drake, who is believed to have brought tobacco from Virginia in 1586, was the first to bring it into England.

Perhaps it is safe to assume that Sir Walter Raleigh and his companions were the first in this country to use the herb for smoking purposes; this was in 1584.

One thing, however, is very certain, and that is that the custom of smoking tobacco very quickly succeeded its introduction, and the growth of this habit, in spite of the most strenuous opposition, cannot fail to strike us as remarkable.

SOURCE.

Tobacco is the leaf of *Nicotianum Tabacum* and allied species. The genus *Nicotiana* contains about seventy-three species. Of the various species, *N. Tabacum* is by far the most extensively cultivated. It is a fine plant, growing to a height of six or seven feet. The leaves are sometimes two feet in length, and average about eighteen or twenty inches; they are very shortly stalked, and the base is more or less amplexical; the flower is pink, or pale red. It constitutes a very large proportion of commercial tobacco, being known and cultivated nearly all over the world.

American tobacco is almost exclusively of this species, although many varieties of it are now recognized, such as Kentucky, Big Frederic, Virginia, etc. The same plant furnishes the tobacco of Havana, France, Holland, Belgium and others. The next important species is *N. Rustica*, or Syrian tobacco. This is a much smaller plant, averaging three and a half feet in height; it has a greenish flower; it furnishes the Turkish, Syrian, and perhaps the Latakia tobaccos. It is a native of America, but is now cultivated chiefly in Asia, Africa, and Europe. It is a hardier plant than *N. Tabacum*.

The third important tobacco is *N. Persica*, which has a white flower. These three species probably constitute the whole of the tobaccos grown, although each has many varieties, especially the first *N. Tabacum*, which almost invariably forms a fresh variety when it is transplanted.

Until quite recently, "Tumbeki," the Persian tobacco of Eastern commerce, was thought to be the produce of *N. Persica*, some few experts holding the opinion that it was obtained from *N. Rustica*.

This led to much discussion, followed by much conflicting literature, so that seeds of the plant which yielded the tobacco in question were obtained from various reliable people in Persia, and sown at Kew. Meanwhile entire plants were also examined, and resembled neither *N. Rustica* nor *N. Persica*, and when the plants grown from the seeds received from Persia were examined, they turned out to be those of *N. Tabacum*. This was published in the *Kew Bulletin* for 1891, p. 84.

Not feeling quite convinced on the subject, on account of the various opinions obtained from different sources, I wrote to Kew last week, and two days ago received the following reply from the Director, Mr. W. T. Thiselton Dyer, F.R.S., etc.:

"DEAR SIR: As to Shiraz tobacco, there is no ambiguity as to the conclusion arrived at in the *Kew Bulletin* for 1891, p. 84. What is ordinarily called Turkish tobacco, and as far as I know, only used for cigarettes, is the produce of *Nicotiana Rustica*."

This note on the source of Turkish tobacco is in harmony with the statement previously made by me, which I wrote a fortnight ago.

CONSTITUENTS.

The characteristic organic constituent of the tobacco plant is the alkaloid nicotine, with which is generally associated the essential oil or "tobacco camphor," viz., nicotianin. The proportions which all the organic substances in the plant bear to one another greatly affect the aroma and taste of the tobacco. The burning is somewhat influenced by them, but far more by the mineral or inorganic constituents present.

The freshly-cut leaves contain over 80 per cent. of water, and the proportion of nicotine varies from 1 to about 10 per cent.

Syrian is one of the lowest; that is, as regards the percentage of nicotine it contains. Two distinct samples that I examined, although widely differing from each other, gave an average of only 0.852 per cent., the actual figures being 1.093 and 0.612.

The process of determination was as follows:

Twenty-five grammes (or more or less, according to the amount of the sample at my disposal) of the dried and powdered tobacco was intimately mixed with slaked lime and distilled in a current of steam until the condensed steam was no longer alkaline; the distillate was slightly acidulated with dilute H_2SO_4, and evaporated to a conveniently small bulk. This was made alkaline with soda, and agitated repeatedly with successive portions of ether. The separated batches of ethereal solution of nicotine were then mixed and exposed to the air in a cool place. This exposure to the air carries away ammonia, if any be present, as well as ether.

Water was added to the ethereal residue, and the amount of nicotine present determined by decinormal H_2SO_4, using methyl-orange as an indicator. 1 Cc. of decinormal H_2SO_4 represents 0 0162 gramme of nicotine ($C_{10}H_{14}N_2$).

It is important that the nicotine should not be left about longer than is absolutely necessary, since it is appreciably volatile at the ordinary temperature.

Sometimes the unconcentrated ethereal solution is titrated, but in such cases ammonia, if present, would make the results high. The neutralized solution is therefore separated from the ether and evaporated to dryness over a water-bath and weighed. Some prefer to add a few Cc.'s of decinormal acid before evaporating, and these would, of course, have to be taken into account.

The residue is treated with absolute alcohol, which dissolves the sulphate of nicotine, but not the ammonium sulphate; the latter must be dried, that is, freed from alcohol and weighed, and this weight, deducted from the weight previously obtained of nicotine sulphate, will leave the absolute weight of nicotine sulphate $(C_{10}H_{14}N_2)_2H_2SO_4$.

Table of Results, arranged according to per cent. of Nicotine.

Variety examined.	Amount of moisture present in sample, per cent.	Total ash, per cent.	"Alkaline salts," *i.e.*, ash, sol. in HCl, per cent. of 100 pts ash.	Nicotine, per cent.
1. Syrian leaves (*a*)	8.70	.....	.....	.612
2. American chewing	.....	20.6	58.25	.935
3. Syrian leaves (*b*)	8.00	.....	.....	1.093
4. Chinese leaves	6.12	.....	.....	1.902
5. Turkish (coarse cut)	.....	.....	.....	2.500
6. Golden Virginia (whole strips)	14.00	17.82	70.70	2.501
7. Gold Flake (Virginia)	.....	18.1	71.60	2.501
8. "Navy-cut" (light colored)	.....	18.6	.....	2.530
9. Light returns (Kentucky)	.....	16.1	61.11	2.733
10. "Navy-cut" (dark "all tobacco")	.....	16.6	.....	3.640
11. Best "Birds-eye"	.....	16.0	64.33	3.931
12. Cut Cavendish (*a*)	.....	18.62	70.90	4.212
13. "Best Shag" (*a*)	.....	15.46	80.25	4.907
14. "Cut Cavendish" (*b*)	.....	.....	.....	4.970
15. "Best Shag" (*b*)	.....	.....	.....	5 000
16. French tobacco	.....	17.29	.....	8.711
17. Algerian " (*a*)	.....	17.29	.....	8.813
18. Algerian " (*b*)	.....	17.40	.....	8.900

The above list includes no proprietary tobaccos, and it must not be inferred that the samples examined were standard samples. They were obtained from very different sources, no two samples of one kind being obtained from the same source. The ash was not determined in Nos. 1, 3, 4, and 5, for want of material, while the

*Read at a meeting of the School of Pharmacy Students' Association, January 11, 1894.

examination of Nos. 15, 16, 17, 18, was incomplete for lack of time.

The average percentage of nicotine in Syrian tobacco is from 1 to 2; in Manilla and Havana 1 to 3; Virginian and Kentucky up to 7; French up to 9. The French and Algerian samples which I examined resembled each other very closely in every way, which may probably be explained by the fact that much of the Algerian tobacco is imported into France and manufactured at the government factories.

It is supposed that the aroma given off during the smoking of tobacco is due rather to the nicotianin or tobacco camphor than to the nicotine, although the former is present only to a very small amount. The odor given off from an aqueous solution of nicotine, however, was variously described to me as like that of senna tea, or a saucepan that cabbage has been boiled in.

The conditions of soil and climate which favor the production of nicotine retard that of nicotianin and *vice versa*. The quantity of nicotine present is no criterion of the quality of the tobacco, inasmuch as many of the most delicately-flavored and choice tobaccos contain little of it. The cellulose, gum, etc., in the leaf give off objectionable odors in burning, and fermentation gets rid of or modifies these when present in considerable quantity. The fermentation must not, however, be excessive, or objectionable and injurious ammoniacal salts would be formed. Many tropically-grown varieties contain little of these unpleasant constituents, so that in some cases fermentation is dispensed with, and in many others is greatly lessened, sun-drying alone often proving sufficient for the preparation of the leaves. The chief organic acids in tobacco are malic, citric, and oxalic, while acetic acid has been found in fermented tobaccos.

The ash of tobacco varies greatly in composition and quality, although the percentage is from 12 to 20; it invariably contains potassium, sodium, calcium, magnesium, aluminium, usually a trace of iron oxide, and carbonic, phosphoric, silicic, and sulphuric acids, and chlorine.

Potash is sometimes present to the extent of 30 per cent. of the total ash, and should be mainly combined with the organic acids. The ready decomposition of the organic potassium salts by heat constitutes a good burning tobacco. The potassium salts are converted into carbonate in burning, and consequently the combined presence of potassium and carbonic anhydride in the ash may be taken as a good indication. From the excess of these two, of course, it follows that the other constituents must be present in smaller proportions, the lime generally lower than the potash, with smaller quantities of magnesia, soda, and alumina. Iron is objectionable, giving a red ash. Lithium is present in the ash of most tobaccos. Silicic and phosphoric acids, even in considerable quantity, do not seem to affect the combustion to any great extent, but chlorine, except in very minute quantity, retards it.

The leaves contain more calcium, magnesium, and silicic acid, and less alkali, phosphoric acid, and chlorine than the stalks. The stalks contain much potassium nitrate, and their presence in "bird's eye" tobacco renders this tobacco very readily combustible without any addition.

According to Nessler, tobacco burns best when it contains a large proportion of potassium malate, but the effect may be imitated by the addition of acetate or other organic potassium salt: The combustibility may be diminished by the addition of magnesium or calcium sulphate. Sulphates seem to favor proper combination. Mayer observes that tobacco which burns badly can be made to burn well by steeping it for twenty-four hours in a 0 5 per cent. solution of potassium acetate or nitrate. A solution of calcium acetate of the same strength gives excellent results, as I have proved.

Tobacco seeds yield by pressure 30 per cent. of a greenish-yellow, mild, odorless oil, having a sp. gr. of .923 at 15° C. This oil quickly dries by exposure to the air.

IMPORTATION.

The forms in which tobacco is imported into this country are many, each variety being purchased according to its suitability for the preparation of some fancy tobacco, and although commercial tobacco is divided into five classes, every manufacturer has his own method of selection.

The chief imported varieties are Virginian, Kentucky, Maryland, Indiana, Java, China, Japan, Ceylon, Turkish and German. The largest quantities come (1) from the U. S. A.; (2) Germany; and much less from Japan, India, China, and Eastern countries.

Imported tobaccos generally contain about 14 per cent. of water, although apparently dry and brittle.

MANUFACTURE.

The bulk of imported leaves are used for the manufacture of the fancy tobaccos, the material being chosen according to the variety of salable tobacco required.

Shag is usually made from the darker and stronger varieties.

In "bird's eye" the prepared leaves are placed in such a manner upon one another that they will be cut right across the midrib.

For "twist" or "cake" tobacco the leaves are stripped, moistened, and placed end to end, and then spun into a rope round a reel, or wound into a ball, either by hand, or by a spinning-wheel. The whole is then steeped in liquor, and finally oiled with sweet oil. The oiling process greatly affects the ready burning of this tobacco.

In America it is usual to saturate the leaves and stalks previous to pressing into cakes with molasses, or a mixture of this substance and licorice. I have extracted a considerable quantity of glycyrrhizin from this cake tobacco, and have also found ligulate florets in it.

Leaves which are to be made into cigars must possess the following qualities: They must be of a good color, possess a fair amount of body, and an agreeable odor, and must give off an agreeable aroma when burning, and last, but by no means least, they must burn well. It should also be mentioned here that a fine texture and small veins are favorable characteristics. A machine is now in use by which midribs and stalks are flattened by pressure so that they may appear like parts of the lamina.

The "burning test" is to ascertain whether the leaves will continue to burn after being once lighted, although this can be no guide as to the quality of the cigar. Sometimes cigars are made of tobacco which will only burn very slowly and difficultly, in which case it is the rule to mix "fiery" tobacco with them, but this method produces only inferior cigars, and unless they are made with extreme care they do not burn evenly.

The best cigars are made of one kind of leaf only, but in common kinds the interior is a mixture, made up of stalks, etc., concealed in an attractive wrapper. In many foreign cigars the wrapper has been found to contain much potassium nitrate, while the interior, consisting of the same kind of tobacco, contains none. This is added so as to make the wrapper burn down evenly with the interior. Glycerin is said to be sometimes added to keep the cigars from becoming too dry.

Cigars are rarely adulterated, and though not always what their outside would represent them to be, they contain nothing but tobacco. Cases have been reported of cigars containing hay, cabbage, and brown paper, but such cases are extremely rare.

The chief imposition seems to be the practice of placing home-made cigars in imitation foreign boxes. Another custom is to send German and other continental to the West Indies, whence they return as a special brand of West Indian cigars.

Cigars chiefly come from the West Indies (and these, of course, include the German ones), the Philippine Islands, and, recently, from Mexico and Jamaica.

Cigarettes are usually made of light tobacco, such as Turkish Salonica, etc., which has but little odor, and this a pleasant one. American tobacco is largely used for this purpose.

Snuff is made from finely powdered tobacco stalks. The moisture should not exceed 25 per cent, but is sometimes present to the extent of 50 per cent. It is variously scented. In the United Kingdom nothing is allowed to be added to snuff except the carbonates, chlorides, and sulphates of potassium and sodium, and the carbonate of ammonium.

ENGLISH-GROWN TOBACCO

From the very first the cultivation of tobacco in England was a success, but this was prohibited by James I. and Charles I., though with little effect. The home-grown tobacco was heavily taxed, and it was expected that this would cause the cultivation to be dropped for want of profit. This heavy taxing was due in a great measure to the difficulty experienced in collecting the duty, which was extensively evaded. In 1652 the cultivation in England was prohibited, and shortly afterward an order was issued to destroy the plantations. The illegal growth, however, continued, and the cultivation was not finally stopped until the reign of George III., when, in 1782, an act to this effect was passed, and the tobacco trade was forced out of the country.

Extensive plantations in Yorkshire were by this act destroyed, and the planters heavily fined and imprisoned.

The growth of tobacco in Ireland was not so hampered by opposition, and so it managed to struggle on till 1831 when it was suddenly suppressed.

In 1886, owing to the agricultural depression in this country, the question of cultivating tobacco in England was once more raised. Permission was sought and obtained, with severe restrictions, to make experiments on the subject.

The results were, to say the least of it, promising, although nobody expected we should be able to grow Havana cigars in Kent, even though they do make them in Germany.

In 1887 permission was again obtained, but as soon as the new industry sprang up in this country it encountered tremendous opposition and was finally stopped.

Some samples of English-grown tobacco were analyzed and found to contain, on the average, light leaves 3.6 per cent., and the dark leaves 2.4 per cent. of nicotine. It will be noticed that the proportion of alkaloid in the light leaves was higher than in the dark, the reverse of what is usually the case.

The Standard Temperature for Specific Gravity.*

By D. B. Dott, F.I.C., F.R.S.E.

For the accurate determination of the specific gravity of a liquid the most suitable temperature is 0° C., chiefly because it is easy to obtain and maintain that temperature correctly by immersing the vessel containing the liquid in melting ice. For practical purposes, however, what is wanted is not extreme accuracy, but sufficient accuracy, with the maximum of convenience. Hence the specific gravity of a liquid is usually referred to the ordinary temperature, which has come to be generally regarded as 60° F. There is, however, no absolutely fixed rule in this respect. The legal standard for determining the measures of capacity is 62° F., and in looking over such a book as Watts' "Dictionary" one sees all manner of temperatures, from 10° to 20°, in the references to the authorities quoted. There may be a sense in which 60° F. is the normal temperature. If we were in the habit of working out of doors it might perhaps be so regarded, but the average temperature of a laboratory must be decidedly over 60° F. Besides, the question of what constitutes the average temperature of a laboratory is not the chief consideration in the matter under discussion. In the very usual methods of determining specific gravity by means of a bottle with perforated stopper, or by the ordinary form of sprengel tube, it is of no consequence that the temperature should fall in the course of weighing, but it is decidedly objectionable that the temperature should rise. Not only so, but while it is always easy to slightly warm a liquid, it is difficult and troublesome in summer weather to cool the liquid to 60°. What I wish to submit is that in the future determinations of specific gravity the more convenient course would be to refer the determination to 20° C. instead of to 15°.5 as is customary at present.

* Read before the Edinburgh branch of the British Pharmaceutical Society.

Medical Notes.

Iodoform and Asafœtida for Influenza.—D. Leslie E. Keeley, of gold cure fame, states that he has had the most favorable results in practice in influenza from the administration of pills one-eighth grain of iodoform and four grains of asafœtida. He states that four of these pills should be given every six hours during the day and night.

Digitalis for Chilblains.—To prevent suppuration of fissures or ulcers, Dr. Pilatti (*Sem. Med.*) recommends the local use of the following formula, which has given him very satisfactory results when employed in conjunction with general treatment:

Tincture digitalis	2 parts
Thymol	1 part
70 per cent. alcohol, } Glycerine, }	of each 50 parts

Externally.

Against the itching, painting with iodide tincture, once every three or four days, is considered very efficacious. Fatty substances, even vaseline, should be avoided, and warm gloves and stockings are held to be more harmful than useful.

The Treatment of Erysipelas with Chlorphenols and Bromphenols.—Tchourliow (*La Semaine Mèdicale*, 1894, No. 2) has employed topical applications of 1, 2, and 3 per cent. ointments of orthochlorphenol, parachlorphenol, and orthobromphenol in the treatment of erysipelas, with satisfactory results. The ointment is carefully rubbed into the involved area for about a minute twice a day. The friction is followed by tingling, sometimes by a sense of painful pricking, which disappears in the course of two or three minutes. Of 25 cases thus treated a cure ensued on the second day in 6; on the third day in 8; on the fourth day in 3; on the sixth day in 2; on the seventh day in 4; and on the eighth day in 2. It is further believed that good results could be obtained by subcutaneous injection of the same agents in aqueous solution.—*Med. News.*

To Make Bed-pans Comfortable.—Make a pad of cotton cloth with any soft filling, eight inches square and one thick; to one side sew a piece of cotton cloth long enough to do the following: The pad should be placed on the posterior part of the pan on which the sacrum rests; then pass the cotton cloth band from the posterior edge of pan under the latter and forward to the prolongation in front, and fasten by passing the cloth over the latter, through a hole in its substance. This will hold the pad in place, while the latter contributes greatly to the patient's comfort.

Treatment of Dyspepsia in Children.—Tordens, in a discussion of the therapeutics of infantile dyspepsia and the subsequent atonic condition of the bowels, makes four divisions of treatment: 1. Elimination of noxious elements by emesis, lavage (both rarely if ever called for), and catharsis. 2. Anti-fermentative medicines. Among these he includes the various combinations of pepsin, resorcin, calicylic acid. In cases of diarrhœa with markedly green stools, he recommends lastic acid in small doses.

The following combination he also finds useful:

Creosoti	2–4 drops
Aquæ destil.	35.00 Gm.
Syr. altheæ	15.00 Gm.

M. Sig.—A small teaspoonful every two hours.

3. Sedatives, warm baths, and light friction. For colicky pains a mixture of aquach amomilla, subnitrate of bismuth, and syrup of anise often gives relief. 4. Tonics and stimulants for the subsequent atony of great value are:

Tinct. cascarillæ	10 drops
Aquæ destil.	50.00 Gm.
Syrup	10.00 Gm.
Ext. cort. chinæ	0.25 Gm.
Aquæ destil.	50.00 Gm.
Syr. aurante	10.00 Gm.

M. Sig.—To be given in teaspoonful doses.—*Boston Medical and Surgical Journal.*

Permanganate as an Antidote to KCy.—J. Kossa, considering that potassium permanganate ought, theoretically, to act as a chemical antidote to potassium cyanide, by checking the paralysis of the respiratory centers, has performed some experiments, the results of which appear to fully justify his hypothesis. Rabbits were shown to be fatally affected in a few minutes by 0.01 Gm. of the poison, but if the time of administration 0.5 Gm. of permanganate dissolved in 50 Cc. of water was also introduced into the stomach doses of cyanide up to 0.1 Gm. failed to cause death. Larger quantities (0.2 Gm.) proved fatal under similar conditions, but the action of the poison was much delayed. Successful experiments were also performed with aqueous solutions of hydrocyanic acid containing 0.1 per cent. It is suggested, therefore, that in cases of cyanide poisoning ½ to ¾ liter of a 3 to 5 per cent. solution of permanganate be administered immediately (*Vratch*, through *Nouv. rem.*, ix., 567).

The Antipyretic Action of External Applications of Cocaine.—At a recent meeting of the *Société des sciences médicales de Lyon*, the proceedings of which are reported in the *Lyon médical* for January 14, M. Gelley, a hospital interne, made a communication on the antipyretic action of cocaine applied to the skin. In Professor Teisser's service a nurse had been directed to make applications of guaiacol to a number of feverish patients. Having one day used by mistake a solution of cocaine, he reported that he had taken the wrong bottle, but the patient's temperature curves nevertheless showed a reduction. Systematic trials were then begun and M. Teisser was able to observe that a reduction of several degrees was produced if care was taken to make the applications at a time when the temperature was no longer rising. The effect upon the general condition was apparently the same as when guaiacol was painted on. The patient experienced a sensation of repose and well-being, but the course of the disease was not modified. The procedure is the same as with guaiacol. A solution of from three-quarters of a grain to a grain and a half of cocaine in a quarter of a teaspoonful of water should be used for each application, and the solution is to be applied to the upper part of the thigh. The antipyretic action of the application of cocaine is analogous to that of the application of guaiacol, but it is the little less energetic. M. Guinard reported that he had repeated these experiments on rabbits. He had resorted to the use of a cocainized ointment, the use of which was easier, but he had satisfied himself that unmedicated ointment was incapable of producing any reduction of temperature With the cocainized ointment on the other hand, he had caused a reduction of nearly 2° F. He thought it demonstrated that the medicaments employed acted upon the peripheral nerves.

Ferratin—a New Preparation of Iron.—Professor O. Schmiedeberg, who has for some time been working at the subject, announces that he has succeeded in isolating the organic iron compound which is the only form in which iron is ingested with food and stored up in the tissues as a reserve material for the formation of blood. This natural ferratin, as he proposes to call it, is difficult and expensive to prepare, but after many failures an artificial substance of identical composition can now be manufactured. It is claimed that this preparation of iron, even when its administration is long continued, never gives rise to disturbance of the functions of stomach and intestine; that, indeed, improvement of the appetite and evacuations follow from its wholesome local influence upon the alimentary mucous membrane; and that it is *par excellence* the assimilable iron compound. Representing as it does the natural iron of the food, ferratin may be regarded primarily as a food, and may be administered to patients who, otherwise healthy, show signs of inadequate blood formation. It is likely also to be of much service in cases of chlorosis, where the long-continued administration of iron is necessary. Ferratin contains 6 per cent. of iron. It is a fine, reddish-brown powder, insoluble in water. A sodium compound is also prepared, and this is readily soluble. For children the daily dose is from 1 to 8 grains; for adults 10 to 20 grains.

Bismuth in Gastric Catarrh.—Pick is of opinion that bismuth frequently fails in this condition because the doses administered are insufficient and because as usually taken a proportion of the drug is retained in the pharynx, œsophagus, etc., and does not reach the stomach for some time. The insoluble nature of the subnitrate makes the chance of poisoning extremely remote, and the author therefore employs this salt in doses of 3 to 4 drachms. The dose is divided into two parts and swallowed in water paper. It is given half an hour after a teaspoonful or less of Carlsbad salt dissolved in half a pint of warm water has been taken. The saline draft should be prescribed before breakfast, and after the bismuth the gastric region may be treated to massage in order to secure the diffusion of the drug over the whole surface of the mucous membrane.

The Antiseptic Action of Diaphthol.—In the *Revue générale de clinique et de thérapeutique* for January 17 there is a letter in which the writer remarks that M. Guinard has been making a critical and experimental study of diaphthol, which is the orthoquinolinemetasulphonic acid of chemists. It is a powder, fusible at 295° C. and capable of being crystallized in the form of brilliant needles which are colored green by perchloride of iron, and not by contact with metallic iron. By its decomposition it sets oxyquinoline free. With an alkaline solution it forms soluble diaphtholates. The diaphtholate of sodium in a ten per-cent. solution kills the *Bacillus pyogenes fœtidus* and the *Staphylococcus pyogenes* in thirty or fifty minutes. In a five per cent. solution it only weakens their virulence.

Diaphthol is not very poisonous The urine of animals which have ingested it rarely undergoes ammoniacal fermentation; nevertheless, it becomes putrid. In experiments recently made, it has been ascertained that the liver of these animals is preserved a long time without decomposition; therefore it is a substance which is opposed to certain fermentations. Add to these essential qualities the fact that this remedy is well borne by the gastric and intestinal mucous membranes, and it is easy to understand the interest shown in the use of diaphthol as an internal antiseptic, and especially as an antiseptic of the urinary passages, as it is eliminated free by the urine.

Dyspepsia and Constipation.—Germain Sée considers that most of the conditions treated as dyspepsia, dilatation of the stomach, etc., are really sluggish conditions of the enteric mucous membrane due to constipation. He insists on the mechanical *rôle* of this constipation in causing hemorrhoids, hernias, vesico-uterine tumors, hypertrophy of prostrate, etc. He recommends that the constipation be overcome without purgatives, but that simple laxatives like senna, hydrastis canadensis, castor oil or large doses of olive oil be used. To relieve the pain attending these conditions of the mucous membrane of the intestine, he recommends:

Calcium brom., } Calcium chlorid }	āā 50 Gm.
Aquæ	500 Gm.

Sig.—Dessertspoonful in twice its quantity of water at meal times.

For particularly acute crises of pain he uses:

Menthol	10 Gm.
Spts. vin rect.	q. s.
Aquæ des.	180 Gm.

Sig.—Teaspoonful as indicated.

To combat fermentation and tympanism, he recommends phosphate of soda two scruples to three scruples, salicylic acid Gm. iij to vi, and borax. To combat auto-intoxication he regulates the diet.

The Clinical Effects of Hyoscine Hydrobromide.

The January number of the *Practitioner* contains the report of the clinical experiments of Gordon Sharp, M.B., with this drug. Although hyoscine, he says, is an isomer of atropine and hyoscyamine, it is generally believed to differ widely from them in its physiological effects It was from the reports previously published of its beneficial action as a motor calmative, cerebral sedative, and hypnotic in delirium that the author was led to make a thorough test of the drug.

It was used hypodermically in cases of delirium tremens and in others for sleeplessness. In one of the delirium cases the effect was to reduce the large movements to a constant jerking of the extremities. There was paralysis of the muscles of deglutition, and the pulse and the movements of respiration were increased to such an extent that sleep was impossible. The pupils were widely dilated, with the eyes wide open.

For a time the patient was in a comatose condition, but finally came out from under the influence of the medicine. A mixture of chloral and potassium bromide was given to produce sleep and quiet nervousness.

In another case of delirium the author was satisfied that death was hastened by the great stimulation of the circulation and of the respiratory center. In a case of anæmia, where everything had been tried to correct the headache and sleeplessness, a dose of hyoscine was given. It produced delirium so great as to alarm the attendants. There was convulsive jerking of the limbs, with extreme dryness of the throat, but without the slightest hypnotic effect.

The author has decided that hyoscine differs but little in its action from atropine, and thinks that, until more is known of its chemistry, pharmacology, and clinical effect, it can hardly be recommended as a safe hypnotic.—*N. Y. Med. Jour.*

The Prevention of Tuberculosis

The question of the best methods of treating tuberculosis and preventing its spread came up for consideration at a meeting of the New York State Board of Health, held in this city on February 9.

Dr. Cyrus Edson, president of the Sanitary Board of the City of New York, made the most important contribution to the discussion, submitting a report that was listened to with the deepest attention.

"The matter of the contagiousness of tuberculosis, referred to me," said Dr. Edson, "has been very carefully considered. The subject is well summed up in the following three propositions, which are to be considered as proven facts:

"First—Tuberculosis is a contagious disease, and is distinctly preventable.

"Second—It is acquired by direct transmission of the tubercle bacilli from the sick to the well, usually by means of the dried and pulverized sputum floating as dust in the air.

"Third—It can be to a great extent prevented by simple and easily applied measures of cleanliness and disinfection.

PREVENTIVE MEASURES.

"I have the honor to offer the following recommendations, based upon the foregoing premises, to the Board for its consideration:

"First—That circulars be sent throughout the State, setting forth the danger of the disease and the fact that the discharges from the lungs of tuberculosis patients are not only dangerous to others, but also to the person afflicted, and also setting forth the danger of expectorating in places where the sputum is liable to be dried and carried by the air in the form of dust.

"Cases should be reported to local health officers within seven days of the time when the sick person comes under observation. Then the officers should take the necessary action.

"Second—After the death of a patient the room occupied by him should be thoroughly disinfected. The entire premises should be carefully treated.

"Third—Suitable receptacles or cuspidors should be provided to receive the sputa. These should be put in all public places, such as railroad cars, factories, stations, etc."

Dr. Edson then suggested that a circular embodying the following points should be approved by the State Board of Health, and distributed among local health officers, physicians and others vitally interested in the matter:

NECESSITY OF DISINFECTION.

"First—Local health officers will register the name, address, sex and age of each patient suffering from tuberculosis.

"Second—When notice of the existence of the disease shall be obtained inspectors will visit the premises and family, and leave circulars furnishing the necessary advice for preventing the spread of the disease.

"Third—Premises which have been occupied by consumptives, when vacated by their death or removal, must be freed from all such articles as carpets, rugs, bedding, etc. Then these articles must be thoroughly disinfected.

"Fourth—The authorities of all public institutions under the jurisdiction of the State Board of Health, such as hospitals, dispensaries, asylums, prisons, homes, etc., shall be required to furnish to the Board of Health of the State of New York the names and last addresses of every consumptive coming under observations with seven days.

"It is the earnest wish and hope of the State Board of Health that an earnest and determined effort be made to restrict the ravages of the most prevalent and formidable disease with which modern civilization has to deal."

As containing a concise statement of facts which should be known by consumptives and those living with them, Dr. Edson submitted the following:

FACTS WHICH SHOULD BE KNOWN BY CONSUMPTIVES.

"Consumption is a disease which can be taken from others. It is not simply caused by colds. It is usually caused by germs which enter the body with the air breathed.

"What consumptives cough or spit up contains millions of these germs, any one of which may cause a person to get the disease. The matter dries and floats in the air in the form of dust. Then a well person may receive the disease from one afflicted by consumption. It can be cured, and generally is not fatal.

"Healthy persons may live safely with consumptives if the matter mentioned is destroyed. This matter should be placed in cups containing water, then the cups should be carefully emptied and washed twice each day. Consumptives should sleep alone."

"Doc," the Corner Druggist.*

Whether it is because of the financial stringency through which we are passing, or whether other influences are being felt, there appears just now to be a decided increase in the amount of medical knowledge demanded and furnished in the drug store. This does not apply alone to the smaller stores in crowded districts, nor to the druggist in the country, where often "Doc" has a well earned diploma to back up his possession of the title, and his right to prescribe as well as to dispense.

Considering the pleasant business and social relationship habitually maintained between doctor and druggist in this city, it is the more to be regretted that duty requires us to make a vigorous protest against what appears to be a growing tendency on the part of some apothecaries, even in the best portions of this city, to usurp the prerogatives of the properly qualified medical adviser. The physician can have no better friend and ally than the honest dispenser of his prescribed remedies, and by reason of the security and satisfaction he has in the belief that pure drugs, accurately weighed and skill-

* Editorial in the *Medical Record.*

fully combined, will be delivered on his written order, he feels that he is indebted to the extent of a certain amount of moral and financial support.

The appreciation, on the physician's part, of this conscientious co-operation may be shown in many ways, and the prosperity of this or that pharmacy can often be clearly traced to practitioners who have given it their support and commendation. When dishonesty enters the druggist's door, enmity must replace the doctor's friendliness.

Acting the part of the physician is one form of dishonesty, and a bad one. The druggist without a medical diploma has no more right to heal the sick than any other irregular or quack. Perhaps it is because we have done so much to rid the city of the latter undesirable class that the druggist finds his field of would-be usefulness increasing.

The habit of calling upon "Doc" for advice in "slight ailments" gradually leads to weighty transcounter consultations and examinations in the back room, to say nothing of the minor surgery practiced, and indeed urinary analysis made in some accommodating shops. When the financial loss to the physician from all this is taken into consideration, together with the injustice done him in having his successful prescriptions passed along for the benefit of "similarly affected," and the injurious results arising from the unauthorized refilling of prescriptions, one must needs wonder that no decided stand in self-defense has been taken. To be sure, the increasing use of tablets has dealt the druggist, as well as the homœopathist, a staggering blow, and in some instances the doctor's office has been stocked with remedies in convenient form from motives of self-protection. Whatever falling off there may have been in the prescription department from this growing custom, which is much a matter of individual taste and expediency, it in nowise excuses the apothecary for turning doctor unless he does it in the good old way, in which event we will welcome him with encircling arms. Just as in the dispensary question, it is against the abuse, and not against the institution, that weapons must be taken up. The pharmacy is a necessity, the honest pharmacist a blessing. Let us hope that moral suasion will be the only weapon needed to bring "Doc, the prescriber," back where he belongs, in the ranks of a most honorable army.

Somatose: An Albumose Food-Product.

It is generally believed that broths and soups prepared from meat extracts, while possessed of slight stimulating effects, are devoid of nutritive value, and therefore incapable of acting as tissue-builders. Recent investigations have shown that the peptones, which form so large a proportion of the meat preparations in the market, also possess little or no value as nutrients.

It has, therefore, been the aim of chemists and physiologists, in late years, to eliminate peptones as much as possible from meat preparations, and to materially increase the amount of albumoses, whose value as nutrients has been generally recognized.

The Farbenfabriken vorm. Friedr. Bayer & Co., of Elberfeld, have finally succeeded in their efforts to produce a preparation of constantly uniform composition, consisting almost entirely of albumoses. This preparation has been introduced under the name of somatose.

DESCRIPTION.

Somatose is a light yellow, somewhat granular powder, readily and completely soluble in water and aqueous fluids, odorless and practically tasteless. It is prepared from meat and contains the albuminous elements of the latter in a soluble and highly concentrated form, 80 grains of somatose being equivalent to about 1½ ounces of fresh beef (1 to 8). The salts present in somatose correspond to the nutritive salts of fresh meats, among which occurs the phosphate of potassium so important in the formation of muscular and cellular tissue. Somatose consists essentially of albumoses which have the advantages over peptones of being completely utilized within the organism; of being tasteless and odorless, and well borne by even the most sensitive stomach on account of their freedom from irritating properties.

PHYSIOLOGICAL ACTION.

The nutrient properties of somatose are available both by administration *per orem* and by hypodermatic injection into the cellular tissue. With reference to the nutritive value of albumoses, which constitute about *90 per cent.* of somatose, Professor Chittenden (*Dietetic Gazette*, January, 1894) writes as follows:

"Albumoses are readily absorbed, and hence, when taken as food, easily supply the needs of the body for albuminous matter. In view of these facts it is plain that the higher the percentage of albumoses in an artificial food product the higher will be its nutritive value. So far as can be judged from a chemical examination, this preparation (somatose) must be possessed of high nutritive power, as it is composed chiefly of albumoses or proteoses, free from undesirable by-products and consequently unlikely to give rise to systemic disturbances. It thus differs from ordinary preparations of animal foods in its high content of albumoses, which fact bids fair to make it a valuable product for supplying a lack of albumin within the system."

Dr. Goldman (*Pharmaceutische Zietung*, Oct. 28, 1893) regards the albumoses as readily assimilable substances, which are completely converted into the albumin of the tissues; and Politzer, Gerlach, Ewald, Pfeiffer, v. Noorden, Hildebrandt and others conclude that they are capable of entirely replacing the proteids in the food, and maintaining the body not only in an equilibrium of nutrition, but even producing a gain in flesh.

Dr. Kuhn, who has made a series of careful experiments with somatose on healthy and diseased persons at the medical clinic of Professor Riegel, at Giessen, reports that the preparation was well borne without producing diarrhœa, and that it decidedly promotes reconstructive metamorphosis. Dr. Hildebrandt (*Zeitschrift für Physiologische Chemie*, July 21, 1893) has experimented on animals (dogs) with subcutaneous injections of somatose, and recommends for trial this method of introducing albumoses into the system, in cases where feeding per orem is contraindicated. He found that when injected into the cellular tissue the albumoses are utilized as nutrients in the system, no trace of them appearing in the urine; and Goldmann (*Pharmaceutische Centralhalle*, Oct 26, 1893), who repeated these experiments, reached identically the same results.

THERAPEUTICS.

The properties which render somatose especially suitable as a food for the sick may be briefly recapitulated as follows: 1. It is readily absorbed even in diseased conditions of the gastro-intestinal tract. 2. It is taken up in sufficient quantities to insure the patient against the evils of malnutrition, and has the remarkable property of stimulating the appetite (which is diminished under the influence of the artificial peptones). 3. It does not disturb the most delicate stomach, never causing flatulence or diarrhœa. 4. Being tasteless and odorless, it is easy and agreeable of administration, and, if desired, may be given without knowledge of the patient, and without exciting the repugnance produced by the use of peptones.

These manifest advantages of somatose give it a wide range of therapeutic utility. A number of cases have been recently reported by Dr. Kuhn from Prof. Riegel's clinic at Giessen, which illustrate the benefits derived from this preparation in conditions of extreme malnutrition. Prof. Leichtenstern, of Cologne, writes under date of Dec. 4, 1893: "The preparation was well borne by all the patients, and I am sure that somatose, whose nutritive value is incontestable, will maintain its position among similar products."

Special indications for the use of somatose are: febrile diseases (such as typhoid fever), gastric affections, phthisis, rickets, anæmia, and chlorosis, and convalescence from debilitating diseases.

DOSE AND MANNER OF ADMINISTRATION.

The dose varies according to the age and constitution of the patient, and ranges from 10 0 Gm. to 20.0 Gm. (150 to 300 grains) and even 30.0 Gm. (450 grains) within the twenty-four hours; hence one to two level teaspoonfuls, or two to four dessertspoonfuls, according to age, may be administered daily.

A useful form of administration is the solution of somatose in milk, cocoa, bouillon or gruels. It is preferable to administer these solutions shortly before meals.

Cholera.

It may be interesting to our readers to read some extracts from a letter from Constantinople written last December. The letter is not from a physician, but from a person having such opportunities for accurate observation as to entitle his account to the readiest acceptance:

"Cholera is said to be increasing. I pity the poor, especially the natives, for they have no protection from the municipal doctors, who seize them on the slightest pretense. One man was reported to be ailing a little. The municipal doctor came, said it was cholera, covered him all over with chloride of lime, wrapped him in a cloth, then smeared that with tar, then injected a solution of phenic acid behind his ears and into his nose. The priest was called, was sprayed with a solution of phenic acid till his robe was soaked with it, and his beard and hair; then he was told to say the prayers for the dying. Then the man was carried off to the cholera hospital; and the next day word came that he was dead and buried.

"A few days ago, a *hamal* (porter) who had too heavy a load stopped to rest on the bridge—put off his load, put his hands to his sides and gave a groan. Naturally, he looked a little pale. In a moment a crowd gathered; then the police came and carried him to the cholera hospital, in spite of his protestations that it was his heavy load, that he was not sick. In due time his friends heard that he was dead and buried.

"The poor people are frightened, and try to conceal themselves if they are really sick. Doctors generally are having an easy time, for no one likes to have a doctor seen entering his house."—*Boston Med. and Surg. Journal.*

The New Antidote for Morphine.

Potassium permanganate is now brought forward as an antidote for morphine, far more efficacious than those usually employed A New York physician recently made a striking demonstration of this by swallowing three grains of morphine, following the dose by four grains of potassium permanganate dissolved in four ounces of water. The experiment was tried in the presence of a number of physicians, some of whom were alarmed at what would ordinarily be supposed to result, but no bad effects followed.

It would be quite interesting to know to what extent, if any, this antidote would be efficacious when the morphine has been given hypodermically, all the experiments having been made on dogs, all of whom recovered, through the supposed agency of the permanganate.

But more recently experiments with this new antidote have been tried in Chicago, the subject selected being of the canine species, a small yellow dog weighing fourteen pounds, about one-tenth the average weight of a man. Eight grains of morphine were injected into the neck of the dog which by comparative weight would be equivalent to about eighty grains for a man. After the injection the dog lost its sprightliness, crept out of sight and began to moan. The physicians were in waiting for narcosis to set in before administering the antidote. After waiting for forty minutes, the patience of the physicians gave out and six grains more were administered, making a grain of morphine to each pound of dog. After waiting a long time for narcosis to set in the dog recovered without the use of permanganate, convincing the doctors that this dog was either a confirmed morphine eater or else all dogs were poor subjects for this kind of experiments. The object was to ascertain whether or not this antidote will work when the morphine has been administered hypodermically. As all the experiments heretofore made to ascertain this have been made on dogs, this experiment seems to demonstrate pretty conclusively that dogs are very little susceptible to the effects of morphine and will recover without the use of any antidote. However, if the permanganate acts by decomposing the morphine by its strong oxidizing action, as is the most plausible theory, it hardly seems probable that it could do this when the poison had entered the circulation as well as by more direct contact in the stomach. More experiments of this kind are proposed, and developments will be awaited with interest.

A Study of Dreams.

It is a curious fact that the phenomena of dreaming, which form so interesting and conspicuous a portion of every human life, have been but little investigated in the strictly scientific and experimental method. There are plenty of dream books and folk-lore; medical writers all allude to dreams as factors in disturbed sleep; and some curious attemps have been made to associate the character of the dreams with the pathological condition. But, after all, even the traditional association of nightmare and a heavy meal does not stand on very sound scientific footing. Miss Mary Whiton Calkins, in the *American Journal of Psychology*, has contributed something toward the filling of the lacuna in our knowledge of dreamland.

The subjects experimented upon were two in number, a man of thirty-two and a woman of twenty-eight. The investigation was carried on for eight weeks, during which time the man had 170, and the woman 205 dreams. They had not previously supposed themselves to be great dreamers, and the large number is accounted for by the fact that pencil and paper were kept at hand and every transient dream was at once recorded on awaking. The first point investigated was the time at which the dreams occurred. It was found that most dreams took place in the morning hours. In one case, 73.2 per cent. occurred after 4 A.M., very few on falling to sleep or before midnight. The next inquiry covered the question of the relation of the character of the dreams to the thoughts of waking life. It was found that in about fifty cent. the character of the dream was distinctly connected with some waking thought or suggestion, while in forty per cent. some slight or vague suggestion existed.

As to the vividness of dreams, it was found that about one-half could be classed as very vivid or decidedly vivid, so that details could be recalled and a good story written. The most vivid dreams occurred after four o'clock.

A careful analysis of the dreams shows that during this condition the mind may exercise fairly normal activity. That is to say, the dreamer may remember correctly, imagine clearly, and think connectedly. The latter phenomenon, however, is rare. The statistics show that in the great majority of cases the dreams are associated with familiar persons and places. The subject matter of the dreams was generally trivial, and the writer concludes that one seldom dreams of the serious problems and emotions that confront him while awake. In times of bereavement one seldom dreams of the dead. Miss Calkins considers it very improbable that the train of thought in dreams is swifter than in waking life. If she is right it destroys the credibility of a good many interesting anecdotes. Thus Napoleon is said to have dreamed of a journey, a siege, and a cannonading, and awoke while some explosion was still reverberating.

Curiously enough, some attention is given to the subject of prophetic dreams and of telepathy. While viewing the subject with commendable skepticism the writer cites several dreams which appear to have a certain previsual or telepathic character. The relationship of certain diseases to dreams is a matter of especial interest to the physician; but here he must himself take up the subject and carry out investigations. We trust that Miss Calkins' article may suggest further work in more strictly medical lines.—*Med. Record.*

Sir James Simpson's Early Experiments With Chloroform.

Sir James Simpson's daughter has written in the January *Century* an interesting account of the introduction of chloroform in England, and of her father's early experiments in narcotic and anæsthetic drugs. She says:

"Round the table in the well-known dining-room in Dean Terrace it was his custom every evening to have an anæsthetic *seance* with Drs. Keith and Duncan. Each had a glass or saucer from which to inhale the various substances under trial. On the evening of November 4, 1847, on returning home after a weary day's labor, Dr. Simpson and his two friends sat down to their somewhat hazardous work. Having inhaled several substances without effect, it occurred to Dr. Simpson to try a small bottle of chloroform which he had had, he wrote, 'for several days in the house before trying it, as, after seeing it such a heavy and involatile-like liquid, I despaired of it, and went on dreaming about others.'

"The tumblers were newly charged, and the inhalers resumed their vocation Immediately an unwonted hilarity seized the party, which became bright-eyed and very loquacious. Suddenly there was a talk of sounds being heard like those of a cotton-mill; a moment more, then all was quiet; and then a crash. On awakening, Dr. Simpson's first perception was mental: 'This is far stronger and better than ether.' His second wasto note that he was prostrate on the floor, and that among the friends about him there was confusion. Hearing a noise, he turned and saw Dr. Duncan beneath a chair; his jaw had dropped, his eyes were staring, his head was bent half dnder him. He was quite unconscious, and snoring in a most determined manner. More noise still and much motion, and then his eyes overtook Dr. Keith's feet and legs making valorous efforts to overturn the table."

The interest in these experiments was not confined to the master of the house. The butler experimented also—only on the cook. On one occasion, finding some chloric ether in aërated water, he gave a glass of it to the cook, who, drinking it hastily, fell down unconscious. The butler rushed into the dining-room, saying, "For God's sake, sir, come down! I've pushioned the cook." After the woman was restored to consciousness the man was chary and contemptuous of any other concoction, and to the end repeated stubbornly his sentiment, "Chlory's the thing."

Avoidable Results and Essential Precautions in Vaccination.*

During the present season, there has been a large amount of vaccination done throughout this State and reports have come to us from numerous quarters concerning the prevalence of vaccine disease, especially among school-children, and the results.

First the vaccine which has been used is the cowpox virus obtained from some of the many establishments that now guarantee to physicians a supply of pure animal vaccine. The use of the humanized or Jennerian virus seems to be almost a thing of the past. Nevertheless a few physicians still prefer the humanized virus, one remove from the cow, using for vaccine material the clear lymph of a healthy child, taken about the seventh day; and it has been affirmed that this virus acts more mildly than the animal vaccine, while being equally efficacious in conferring immunity.

With regard to the results of vaccinations, the vaccine disease seems in most cases to have run a fairly typical course, occasionally being of rather severe character. The unusual number of cases of marked general vaccinia eruption is to be accounted for by the unusual number of cases of vaccinia now in the community and in proportion to the total number of children undergoing vaccination at one time is not probably at all increased. In one school in the vicinity of Boston there were about a hundred children successfully vaccinated (primary vaccination); of this number fifty per cent. continued their attendance at school without any interruption; twenty-five per cent. were obliged to absent themselves from school for a few days only, while the other twenty-five per cent. were confined to their homes for more than a week.

*From the *Boston Medical and Surgical Journal.*

A physician living in one of the cities on the coast writes us that in his locality there have been an unusual number of severe cases of vaccine disease. He has never before seen so many "bad arms," and some children have been very sick. All the physicians in that vicinity have used virus obtained from the —— Vaccinal Institute. He has observed from the twelfth day intense inflammatory œdema develop around the point of vaccination, then lymphangitis and cellulitis, fever and other general symptoms of a septicæmic character, finally an extensive cutaneous necrosis in the region of the vaccination. In one instance (in which about the whole city was interested) he despaired of the life of his patient; fortunately the child is now recovering, but with a large slough at the point of vaccination. He believes that in this, as in other similar but not so violent cases, there was a complication of erysipelas due to the introduction of the streptococcus by scratching. Other physicians in the same locality have had cases of a similar nature, and it has been believed that the vaccine obtained on certain occasions from —— farm was of a particularly virulent nature. The cellulitis, erysipelas or lymphangitis which have caused such dire alarm and opposition to vaccination are to be explained by the same principles as under any other surgical operations; some contamination of the wound by micro-organisms. In vaccination the physician has not a complete control of the whole chain of asepsis; he must trust to the honesty and cleanliness of the vaccine establishment, which should be above suspicion.

Our correspondent writes that the ivory points in those packages were stained *red*, as if from admixture of blood; this certainly indicates that sufficient care was not taken in charging the points.

These facts show that the owners of vaccine establishments have a responsibility to physicians and to the public of which they cannot be too mindful. They are expected to furnish vaccine of unexceptionable quality; obtained from healthy heifers, at just the right time, and under conditions of perfect cleanliness and asepsis. The lymph which is furnished should be clear lymph, not lymph and blood or pus.

Physicians, too, have a responsibility in every case of vaccination, and this little operation should not be performed in a hasty and slovenly manner. Though antiseptics may not be used during the operation, as likely to interfere with the result which is sought, yet vaccination should be performed with perfectly clean instruments and aseptically. The scarification may be made with the ivory points themselves, or with a fresh needle for each case, which in addition may be passed through an alcohol flame. Some physicians wisely make a practice of washing the arm before vaccination. All should do so. The same point should never be used on two patients; we fear this has been done, though very exceptionally.

What shall be done with the vaccinated arm? Some apply immediately after the operation a little isinglass plaster over the abraded surface, the vaccine being allowed to dry in, and the plaster having previously been dipped in boiling water. The piece of plaster is taken off next day, and the arm covered with some antiseptic dressing, such as carbolic gauze. This might be expected to be sufficient to protect the vaccine sore from extraneous germs, the gauze being renewed every day. The dried lymph may be covered by aseptic gauze orcotton glued to the arm at the edge with collodion.

We know physicians who take these precautions every time they perform vaccination. It would probably be better that all should. The vaccinated person is provided with a roll of antiseptic gauze for daily dressings, according to the strict directions of the physician. In this way, the danger that foreign microbes (staphylococci, streptococci, etc.) may enter the solutions of continuity caused by the vaccine disease, and thus add to this disease the evils of microbian associations —and we well know how much in some diseases, as diphtheria, the original virulence is intensified by such associations —this danger, we repeat, is thus likely to be reduced to a minimum.

It might be better that vaccine farms should be established and managed by the State, the points being sold at cost or furnished free. Such a proposition is at present under consideration in this State. Where there is a good State Board of Health, a proper supervision for such a farm or farms already exists.

Guaiacol as an Antipyretic.

The *Medical News* for January 27 publishes a portion of a lecture delivered at the Pennsylvania Hospital on January 13 by Dr. J. M. Da Costa, of Philadelphia, entitled Clinical Remarks on the External use of Guaiacol in Reducing High Temperature in Typhoid Fever and Other Febrile Diseases.

Dr. Da Costa thinks that the action of guaiacol is somewhat inferior to that of the cold bath as regards promptness, but he has observed that the reduction of temperature which it produces is more lasting. He thinks it preferable to the use of cold baths, particularly in cases where proper appliances for administering the baths are wanting, and where from the nature of the case it is particularly objectionable to move the patient.

The odor of guaiacol is an objection to its use, and this Dr. Da Costa has not yet been able to overcome. Oil of bergamot has been tried, but the odor of guaiacol overcomes that of the bergamot. Cologne water and oil of sassafras also have been tried, but the best result has been obtained with oil of cloves. Guaiacol is to be rubbed upon the skin of the abdomen or thigh with a camel's-hair brush over a space previously washed with soap and water.

The largest amount that has been applied at once in Dr. Da Costa's experience is sixty drops, but from the application of fifty drops he has witnessed effects that cause him to advise that rarely should so large a dose be used. Thirty drops he thinks about the average dose. The guaiacol is to be rubbed in slowly, and the surface to which it is applied need not be uncovered, for the application can be made under the bedclothing, and it is well to cover the surface with a piece of lint and with waxed paper. The dose should be proportionate to the height of the fever; with a temperature of 103° F. it should not exceed twenty minims at the first trial.

It is not necessary to rub the guaiacol in, but if friction is not used the effect is neither so rapid nor so complete. The quickest way is to paint the guaiacol on the surface and then rub it in with the hand. Five minutes are enough for the purpose. The sensation, which is not unpleasant, is likened to that produced by the application of menthol.

Dr. Da Costa thinks that guaiacol is absorbed by the skin and that it is carried by the circulation to the heat centers, upon which it acts as an antithermic. Apparently its action does not involve the depression that follows the use of antipyrine, phenacetine, and other remedies belonging to the coal tar products. Moreover, it produces less sweating.

In no instance under Dr. Da Costa's observation was there any albumin in the urine or any sign of kidney irritation detected that could be imputed to the use of guaiacol; nevertheless, he advises close examination of the urine in all cases in which the remedy is used.

Coloring Medicines

Coloring medicines is recommended by F. Baron Von Oefele (*Pharm. Centralh.*, 1893, xxxiv., p. 683), on the grounds of the desirability of changing the appearance of medicines from time to time, and of distinctively marking strong and mild remedies. The following examples are given:

Formic acid	20 Gms. (5 drs.)
Blue pyoktanin	1 Ctg. (⅙ gr.)

REVULSIVE.

Soft soap	100 Gms. (3¼ oz.)
Lanolin	10 Gms. (2½ drs.)
Blue pyoktanin	5 Ctg. (¾ gr.)

FOR INUNCTION, IN ECZEMA.

Potassium iodide	3 parts
Starch	3 parts
Hot water	5 parts
Boil, and add	
Lanolin	20 parts

As iodine becomes liberated, while the mixture is preserved, the ointment will turn violet owing to the formation of starch iodide.

As methylene blue is, in itself, employed as an antipyretic, the author recommends adding it to quinine, antipyrine, etc., as follows:

Antipyrine	50 parts
Methylene blue	1 part

Medicines containing hydrocyanic acid should be colored with soluble Prussian blue, as in the following formula:

Morphine hydrochlorate	10 Ctg. (1½ grs.)
Bitter-almond water	10 Gms. (2½ fl. drs.)
Prussian blue (soluble)	1 Mg. (1/64 grain.)

The author gives also the following formulæ:

1—	Carlsdad salt	20 parts
	Gamboge	1 part
2—	Acetanilid	30 Ctg. (5 grs.)
	Rhubarb	3 Ctg. (½ grs.)
3—	Alum	40 Ctg. (6 grs.)
	Saffron	10 Ctg (1½ grs.)
4—	Calomel	15 Ctg. (2¼ grs.)
	Cinnabar	15 Mg. (¼ grs.)
	Sugar	30 Ctg. (5 grs.)

The Local Treatment of Diphtheria.

Dr. A. Jacobi, of New York, at the recent meeting of the New York State Medical Society at Albany said that he believed that the local treatment of diphtheria was best studied on external wounds or on diphtheria of the vagina. One should not use powders in the treatment of laryngeal diphtheria, as they were apt to produce nausea.

Bad-tasting and nauseating medicines of all kinds should also be avoided. It should be remembered that gargles were effective only as far down as the pillars of the soft palate; therefore most of the gargling was useless.

The dangers in diphtheria were, first, from suffocation; second, from heart failure and exhaustion; and, third, from sepsis. Sepsis and a fatal termination usually occurred in cases in which the nares were affected.

The diphtheritic membrane should be destroyed by local applications of a mixture of equal parts of carbolic acid and glycerin, which was more effective than chlorine water.

In general, local applications would be

allowed by adults and large children. Smaller children would struggle and become exhausted if applications were attempted. The struggling was a serious matter with small and very sick children; besides, it was possible in such cases, as a rule, only to reach the tonsils with the application, and sepsis did not usually take place through this avenue. It was better with small children to give internally medicines which were easily absorbed, including iron, mercury, chlorine, and iodine.

The form of diphtheria which was most dangerous was that which attacked the nares and the nasopharynx. In some cases the diphtheritic membrane was tough, in others soft and easily macerated. In the latter cases the virus was most readily absorbed.

Where it was possible, it was well to apply medicines to the throat with cotton wrapped upon a long probang, and they should be applied as thoroughly as possible to the entire membranous surface.

If the nares were affected, the medicine might be poured into the nose with a feeding cup, or a small syringe might be used. The use of an irrigator for the nose was not without danger. Applications should be made with the patient in a recumbent or semi-recumbent posture. Mild applications, including salt water and lime water, would also be found useful in many cases for their cleansing effects, also carbolic acid, creolin, and weak solutions of bichloride of mercury.

Papayotin, in a five-per-cent. solution, or trypsin of similar strength, combined with bicarbonate of sodium, was also useful. For the treatment of adenitis associated with diphtheria, preventive and curative measures should be used. Ice would be effective in some cases. Iodoform, if given by injection, was too painful. If the swelling was extensive, long and deep incisions should be made, and they should be made as early as possible in the history of the disease.

In cases in which hemorrhages occurred, suitable astringents should be used, but solutions of iron should never be used to check hemorrhage. The paralyses of diphtheria should be treated by means of friction.

The most urgent cases were those in which the muscles of respiration were involved. If electricity was used, one must be careful that the muscles were not overstimulated.

Influenza in 1775.*

By Augustin Prichard, F.R.C.S. Eng., M.D. Berlin.

Consulting Surgeon to the Bristol Royal Infirmary.

While looking over some very old documents connected with Quaker families of the last century I found the following paper. It is dated Dec. 6, 1775, and is apparently a copy written in the even, round hand which was peculiar to the Quakers, and signed by John Fothergill, London, himself a stanch Quaker and a very successful and most charitable physician, who began practice pefore 1760. No disease is named in the paper, but it seems to be so complete and graphic an account of influenza, as we now know it, that I have made a copy of it, *verbatim et literatim*, thinking it worthy of a place in *The Lancet*. On searching for some account of the earlier days of the College of Physicians I found in a book called "Physic and Physicians" a notice of John Fothergill, in which it says: "During the prevalence of the influenza in the year 1775-6 (Old Style), he is said to have attended sixty patients a day, and his profits were estimated at £8,000 a year"; and this sentence identifies the disease thus described.

*From the London *Lancet*.

A SKETCH OF THE LATE EPIDEMICK DISEASE AS IT APPEARED IN LONDON.

"About ye beginning of the last month it was mention'd to me in many families that most of the servants were sick; that they had colds, coughs, sorethroats and various other complaints. In the space of a week these complaints became more general, few servants escaped them, especially the men, who were most abroad; many of the other sex, likewise, and people of higher condition were attacked; nor were children wholly exempted. The disease, which had hitherto been either left entirely to itself, or had been treated with the usual domestick medicines appropriated to colds, now claimed the attention of the faculty, and for the space of near three weeks kept them for the most part universally employed. Most of those whom I saw were seized (and often so suddenly as to be sensible of the attack) with a swimming or slight pain in the head, a soreness of the throat and all over the body, with a sense of coldness, particularly in the extremities. A cough soon followed, a running of the nose, watery eyes, slight nausea, frequent calls to make water, and some were seized with a diarrhœa. More or less of feverish heat, inquietude, pain about the breast, præcordia, and in the limbs soon succeeded, but in various degrees. Many were capable of continuing in their usual occupations under these symptoms; others were oblidged to submit to confinement, and not a few to their beds. The tongue was always moist, the skin seldom remarkably hot or dry; the pulse often full, quick, and harder than one would have expected from such a temperature of the skin. Several were seized with diarrhœa: the stools were always black or of a deep yellow color; and so were those for the most part which were procured by purgative medicines.

"In a few days every complaint abated except the cough; this continued the longest of all the symptoms, and in the forepart of the night was exceedingly troublesome and vexatious; towards morning generally came on a sweat and easy expectoration. Those who were seized at first with very copious defluctions from the nose and the fauces or had a plentifull and spontaneous discharge of black billious stools, or made large quantities of a high-colored urine, or sweated profusely of their own accord a night or two after the seizure, soonest grew well.

"In many cases it was necessary to take away some blood, the condition of the pulse and the vehemence of the cough making it necessary. The blood was almost uniformly sizy, representing a flat cake of yellowish tallow floating in a deep yellow serum; very few instances occurred where the size formed that cup-like appearance which occurs in most of the genuine inflammatory disorders. By warmth, diluting cooling liquids, mild diaphoreticks, gentle and repeated purgatives the disease for the most part soon gave way, in subjects otherwise healthy. Sometimes it was necessary to repeat the bleeding; sometimes blisters became necessary, and were serviceable in abating the cough which was the last of all the symptoms that gave way; after the necessary evacuations, anodynes for the most part had very salutary effects. In many instances the disease assumed the type of an intermittent towards its decline; the bark however did not generally succeed in curing it. The symptoms, as often happens in billious disorders, were sometimes aggravated by this medicine. A few doses of some mild cathartick most commonly removed it effectually.

"Many who neglected themselves and went abroad with the distemper upon them frequently got additional colds and brought on a fever of a most dangerous kind; a few died phrenetick. Ancient, asthmatick persons were likewise great sufferers, for the most part a peripneumonick fever came gradually on which often terminated fatally, and of those who did recover their amendment was slow and medication difficult. And indeed it appeared that very few persons wholly escaped the influence of this morbid constitution; for it seemed to aggravate every present malady. It proved fatal likewise to several very young children, disposing them to violent coughs or diarrhœas. Perhaps however there is scarcely an instance to be met of any epidemick disease in this city, where so many persons were seized in so short a time and with so little comparative mortality.

"Though attempts to ascertain the causes of epidemicks are for the most part more specious than substantial, it may not be improper to mention a few facts that gained my attention; to others many more may have occurred and worthy to be recorded. During the greatest part of the summer in that part of the country where I then was (Cheshire) the air was of the most equal temperature I ever knew. In the space of two months the quicksilver in the thermometer once rose to 68, once fell to 56; but for six weeks together it kept between 60 and 66, day and night. The borometer did not vary much more. The weather was during this time very changeable, much inclined to wet; and though it rained more or less almost every other day for six weeks, yet upon the whole no unusual quantity of rain fell; it sunk into the ground as it fell and made the earth very soft and miry; but seldom swelled the brooks or occasioned floods. During this time horses and dogs were much affected; especially those that were well kept. The horses had severe coughs, were hot, forebore eating and were long in recovering. Not many of them died, that I heard of, but several dogs.

"To the consideration of the faculty in this city is this sketch of the late epidemick submitted with all due deference and with a request that if the observations they have made do not corrispond with this recital they will be pleased to communicate their remarks while the remembrance of the facts are recent; in order that as exact an account of this disease as possible may be transmitted to our successors. If those physicians in the country into whose hands this essay may come will be so oblidging as to mention the time when this epidemick made its appearance in their neighbourhood and wherein it differed from the preceding sketch either in the symptoms or method of cure they will likewise contribute to the same good purpose. The united observations of the faculty at large must greatly exceed the utmost efforts of any individual, however warmly he may be disposed to promote the utility of his profession.

"John Fothergill."

London, Dec. 6th, 1775.

Queries and Answers.

We shall be glad, in this department, to respond to calls for information bearing on pharmacy or any of its allied topics, and cordially invite our friends to make use of this column.

When sending for the formula of an unusual, patented or proprietary compound, the query should be accompanied with information regarding the locality in which it is used, its uses, and reputed effect. When it can conveniently be done, a specimen of the label used on packages of the compound should also be sent.

The Composition of Saliva and Perspiration. E. H.—The following facts regarding the secretion and composition of saliva have been compiled from various sources: The quantity of mixed saliva (and fluid of the mouth) secreted in 24 hours amounts to 300–1500 grains; during the process of chewing in 30–58 minutes, 500–700 grains. The composition of saliva is thus stated by Berzelius:

Water	994.9 parts
Pytalin	1.2 parts
Mucus, epithelium and mucin	1.3 parts
Fatty matters	1.1 parts
Salts	1.5 parts
Chloride of potassium and soda	1.7 parts
Lactate sodium and animal matter	0.9 parts
Sodin	0.2 parts

He places its specific gravity at 1.008, though other chemists give the figures 1.002–1.006 and state that it contains 5 per cent. of dissolved solids made up of varying quantities of globulin, serum, albumin, mucin, salts including potassium thiocyanate, and frequently toxin, and various suspended constituents (epithelial scales, leucocytes). Saliva has the power of converting starch into maltose, a small quantity of glucose and dextrin being formed at the same time.

The perspiration of the body is a clear, colorless liquid of marked odor and salty taste; when largely admixed with sebum it is acid; otherwise alkaline. It contains 1–2 per cent. of solids (sodium chloride, fatty acids, neutral fats and cholesterin).

Hall's Catarrah Cure. F. L.—The following is said to be the composition of the above:

Potassium iodide	ʒ i
Comp. tinct. cardam	fl. ʒ iv
Comp. tinct. gentian	fl. ʒ xii
Caramel	q. s.

Saul's Catarrh Remedy, used by inhalation, is said to be composed of the following ingredients:

Comp. tinct. benzoin	fl. ʒ ii
Tinct. tolu	fl. ʒ ii
Chloroform	fl. ʒ i
Sulphuric ether	fl. ʒ i
Aromatic spirit ammonia	fl. ʒ i
Oil of tar	fl ʒ i
Alcohol	fl. ʒ v

California Fig Syrup. E. E. F.—The following is said to be the formula for the above:

Fl. ext. cascara sagrada (tasteless)	1½ fl. ounces
Fl. ext. Oregon grape root	3 drachms
Grd. senna, No. 20, powder	6 drachms
Prunes, Figs	āā 2 oz. av.
Oil of fennel, Oil of cinnamon	āā 10 min.
Oil of cloves	5 min.
Sugar	3 ounces
Water, enough to make	1 pint

Chop the figs and prunes, without stones, to a fine hash, mix with senna, and steep in 12 ounces water for three hours, adding sufficient to replace the water of evaporation. Strain through a No. 40 wire sieve. To this liquid add the sugar and dissolve. Add the fluid extracts and oils, make up to one pint with hot water, which has been poured over the fruit on a sieve.

Chemical Journal. B. E. N., Binghamton, N. Y.—The *Journal of Analytical and Applied Chemistry* was formerly published at Easton, Pa. It has now been merged into the *Journal of the American Chemical Society* which is published at the same place by the Chemical Publishing Co.

Miscellaneous Formulas.

FOR ITCHING.

[A. F. Thompson.—*N. C. Med. Journ.*]

LOTION.

Lead acetate	16 grs. (1 Gm.)
Dilute hydrocyanic acid	1½ fl. drs. (5.5 Cc.)
Alcohol	4 fl. drs. (15 Cc.)
Distilled water	7½ fl. oz. (222 Cc.)

Externally.

FOR CHILBLAINS.

[Dr. Jas. R. Wood.—*M. M Report.*]

OINTMENTS.

1—Zinc oxide	1 dram (4 Gms.)
Powd. camphor, Powd. myrrh, Powd. opium	of each, ½ dram (2 Gms.)
Lard	1 ounce (31 Gms.)
2—Calcium chloride	½ dram (2 Gms.)
Spermaceti	1 ounce (31 Gms.)

LOTIONS.

1—Oil turpentine	4 fl. ozs. (119 Cc.)
Water ammonia	2 fl. ozs. (59 Cc.)
2—Soap liniment	6 fl. ozs. (177 Cc.)
Tincture cantharides	1 fl. oz. (30 Cc.)
Oil origanum	2 fl. drs. (7.5 Cc.)
3—Oil turpentine, Balsam copaiba	of each, 1 fl. oz. (30 Cc.)
Camphorated oil	2 fl. ozs. (59 Cc.)
Tincture opium, Tincture myrrh	of each, 1 fl. oz. (30 Cc.)

NEURALGIA MIXTURES.

[*Chemist and Druggist.*]

I.	Pot. bromid	gr. x
	Quin. sulph	gr. ij
	Ac hyodbrom dil	m| v
	Butyl-chloral. hydrat	gr. ij
	Aq. chloroform, ad	ʒ ss

Every two hours.

II.	Ammon. chlorid	gr. v
	Ferri et quin. cit	gr. ij
	Tinct. aconiti	m| j
	Tinct. gelsemii	m| v
	Aq. cinnamomi ad	ʒ ss

Every two hours.

III.	Succi conii	m| xv
	Succi hoyoscyami	m| xv
	Liq. strychnin. hyd	m| ij
	Syrup. rhœados	ʒ j
	Aq. menth. pip. ad	ʒ ss

Every three hours.

IV.	Antipyrin	gr. v
	Caffeinæ	gr. j
	Tinct. gelsemii	m| v
	Tinct. card. co	ʒ ss
	Aq. aurantii flor. ad	ʒ ss

Every three hours.

FOR CORYZA.

[Grellety.—*Sem. Med.*]

Mix and use as a snuff.

Betol	ʒ ijss
Menthol	gr. xv
Cocain hydrochlorate	gr. ix
Powdered roasted coffee	ʒ iss

CARMEL MONK'S LIQUOR.

[*Chemist and Druggist.*]

Angelica root	ʒ iij
Aniseed	ʒ xj
Lemon peel	ʒ vj
Coriander seed	ʒ x
Nutmeg	ʒ viij
Fresh marjoram leaves and flowers	ʒ vj
Fresh melissa-leaves	ʒ i
Cloves	ʒ viij
Fresh rosemary leaves and flowers	ʒ x
Fresh sage leaves and flowers	ʒ xiv
Fresh thyme	ʒ vj
Fresh hyssop	ʒ vij
Cinnamon	ʒ x
Proof spirit	Cong. xiij

Macerate for three days, then distill 10 gallons, and to the distillate add 10 gallons of simple syrup (1 in 2).

FOR GASTRIC ULCER.

[Stepp.—*Wiener Med. Presse.*]

Bismuthi subnitrat	ʒ jss
Chloroformi	fl. ʒ ss
Aquæ	fl. ʒ x.--M

Two tablespoonfuls, from three to six times daily.

WINDOW-POLISHING PASTE.

[*Chemist and Druggist.*]

Castile soap	2 ozs.
Boiling water	2 ozs.

Dissolve, and add the following in fine powder:

Precipated chalk	4 ozs.
French chalk	3 ozs.
Tripoli	2 ozs.

Mix, and reduce with water to the consistency desired.

SEVEN SUTHERLAND SISTERS' HAIR GROWER.

New Idea says the following formula produces a preparation closely resembling the original:

Bay rum	ʒ vij
Distilled witch hazel	ʒ ix
Common salt	ʒ j
Hydrochloric acid (5 per cent.)	1 drop
Magnesia	A sufficiency

Mix the bay rum and distilled witch hazel, and shake with a little magnesia; filter, and in the filtrate dissolve the salt and add the hydrochloric acid.

GILDING PASTE FOR METALS.

Gold chloride	2 parts
Potassium cyanide	6 parts
Cream of tartar	½ part
Prepared chalk	10 parts
Water	10 parts

Mix. Apply with a woolen rag to the metallic surface, previously carefully cleansed by the application of a mineral acid.

Syrup of Quinine, Iron, and Calcium Lactophosphate.

E. Stern contributes the following formula to the *Pharmaceutische Post:*

Quinine sulphate	2 parts
Distilled water, Dil sulphuric acid	of each enough for solution
Ammonia water	a sufficient quantity
Lactic acid	2 parts
Calcium lactophosphate	6 parts
Iron lactate	3 parts
Hot distilled water	12 parts
Hot syrup	175 parts

Dissolve the quinine sulphate with a sufficient quantity of diluted sulphuric acid and distilled water, precipitate with ammonia (water), filter, and wash carefully. Dissolve the pure quinine in the lactic acid, and add to the syrup. Then dissolve the iron lactate and calcium lactophosphate in the hot distilled water, in a mortar, add to the syrup and filter. Each teaspoonful contains, approximately, 5 centigrammes (¾ grn.) of quinine lactate 7 centigrammes (1⅛ grn.) of iron lactate, and 15 centigrammes (2.3 grn.) of calcium lactophosphate. It is described as of bright yellow, clear color, and pleasantly bitter and somewhat acid taste; it leaves no disagreeable metallic taste in the mouth, keeps very long without losing its therapeutic activity, and deposits no sediment on standing.

For Pulmonary Tuberculosis.—Strizower (*Wiener klin. Wochenschr.*, 1894, No. 3, p. 43) recommends inunctions of mercurial ointment. A half-drachm of the ointment is rubbed into the skin daily, and a warm bath is taken after every fourth inunction. It is not claimed that the treatment is infallible or universally applicable. In cases in which it fails to do good, however, it at least does no harm.

News and Notes.

Gotham Gossip.

Newspaper cosmetics and therapeutics are very wonderful things in their way, as witness the following excerpt from Sunday's *New York Recorder:*

A JAR OF COLD CREAM.

HOW IT MAY BE MADE ECONOMICALLY AT HOME.

The basis of cold cream is always mutton tallow. You can get this at the butchers', and if you tell him what it is for he will select some very fine tallow. Cut the tallow into bits and put it into a saucepan without any water. Set the saucepan into a jar of boiling water and let all remain until the fat is thoroughly "tried" out of the tallow. Strain through a fine sieve, and while it is still warm stir in a teaspoonful of the essence of camphor to every cup of tallow. Next a tablespoonful of your favorite perfume, and stir until all is a sweet smelling liquid. Before it has had time to cool pour in a little toilet jar and set upon the ice over night. It will keep indefinitely, and will be found one of the best remedies in the world for skin that gets rough and "winter sore."

Fancy a candidate for examination giving such a formula as the above for cold cream! The soda water boy himself having been called upon occasionally to stir the ointment of rose water could do better than this.

The unexpected good that may come of methodical habits was strikingly illustrated the other day in a civil suit being defended by I. O. Woodruff, the manufacturing chemist, of Maiden lane. It so happened that a record of his personal expenses would be of material bearing on the case. He therefore produced a series of slips of paper, on one side of which was an abstract of what he had done on each day and on the other the minutest item of his personal expenditures, including stamps, car fare, etc. All this was written in a hand so microscopic as scarcely to be decipherable by the naked eye. These records he was prepared to produce for the past thirty years, and they alone were sufficient to practically determine the case in his favor. Mr. Woodruff explained that as a boy he had been compelled to keep this record; any money expended and not accounted for being deducted from the next week's allowance.

Vivat Bacchus, Bacchus lebe;
Bacchus war ein edler man.

And right royally he reigned, sharing his throne with Terpsichore last Friday night at Madison Square Garden. The Arion *Gesang Verein* turned that big oval barn into a bower of roses and beauty and music and mirth. From the high arched dome hung festoons of flowers an eighth of a mile long, while the fronts of different tiers of seats were all covered with greens and flowers. A wide promenade between the arena boxes and the dancing floor was railed off from the latter by a colonnade of 36 columns, each bearing a globe surmounted by a nearly life-sized, winged figure of Vanity holding in her hand a mirror. Two immense orchestras located on the galleries on either side furnished music in alternation. The procession of floats which moved around the hall at eleven o'clock was gorgeous and in most instances artistic. Following in the wake of the float showing Fashion and her votaries were personifications of various toilet accessories, among which was "Arion's Honey and Almond Cream," a tribute to A. S. Hinds' article. Among those noted by the Gossiper in the arena boxes were: A. C. Behrends, the vigorous president of the Ph. G. Bowling Club, his partner M. Arnemann and wife, and Louis Kessell and wife. In strolling about the promenade I saw a number of other druggists also, among whom were: H. Jarrett, of the Mallinkrodt Chem. Co.; L. Amend, of Eimer & Amend; Eugene Kessler, of Paul Balluff's successors; B. G. Kraft, proprietor of Wanier & Imgard's old store; L. Roediger, Albert Eich and S Miller, both of Tenth avenue; Otto Frohwein, of Fourth avenue; E. L. Fendler, of Broadway; Emil Vockroth, of Jersey City; Mr. Reinhold, who now hails from Harlem, and Mr. Imhoff, of Amsterdam avenue.

The Shipping and Commercial List, a New York paper devoted to market and shipping news, has passed into the hands of D. O. Haynes, of Detroit, Mich., the well known proprietor and publisher of the *Pharmaceutical Era*. The *Oil, Paint, and Drug Reporter* will now have to look well to its laurels, as *The Shipping and Commercial List*, under the management of Mr. Haynes, is sure to prove a formidable rival in their field.

Drug Trade Section of the New York Board of Trade.

The regular monthly meeting of the drug trade section of the New York Board of Trade was held February 15. Thomas F. Main, the chairman, presided. Mr. Hartford, chairman of the committee on membership; Mr. Rogers, of the committee on legislation, and Mr. Stallman, chairman of committee of importers of drugs and chemicals, reported satisfactory progress. Mr. Rogers directed attention to the new pure food bill now before the House of Representatives, and by his request it was referred to the legislative committee; the text of the bill is published elsewhere in this issue. Communications were read from the Philadelphia and New England Drug Exchanges referring to interchange of ideas and co-operation; it was the sentiment of the meeting that the movement started by Mr. Rogers, the former chairman of the section, to bring the drug associations closer together be continued.

Mr. Main announced the following standing committees for the year, and then the meeting adjourned.

Standing Executive.—Samuel W. Fairchild, of Fairchild Bros. & Foster; Wm. Hull Wickham, of McKesson & Robbins; James Hartford, of Schoellkopf, Hartford & Maclagan, Ltd.; Thos. F. Main, of Tarrant & Co.; John M. Peters, of Frazer Tablet-Triturate Manufacturing Co.

Membership.—James Hartford, of Schoellkopf, Hartford & Maclagan, Ltd; Albert Bruen, of Bruen Bros. & Ritchey; C. S. Littell, of R. W. Robinson & Son; Samuel M. Moneypenny, of S. G. McCotter & Co.; W. H. Raser.

Legislation.—Albert Plaut, of Lehn & Fink; Frederick G. Meyer, of Meyer Bros. Drug Co.; Geo. R. Hillier, of R. Hillier's Son Co.; Christopher L. Williston, of Charles Pfizer & Co.; Andrew B. Rogers, Jr., of Rogers & Pyatt.

Arbitration.—John Clay, of Parke, Davis & Co., John L. Riker, of J. L. & D. S. Riker; C. E. Tyler, of Tyler & Finch; Joseph Velsor, of Peek & Velsor; Frederick M. Robinson, of R. W. Robinson & Son.

Jobbing Druggists.—William S. Mersereau, of W. H. Schieffelin & Co., chairman, and one representative from each jobbing drug house in the drug trade section.

Manufacturing Chemists.—Harry T. Jarrett, of Mallinckrodt Chemical Works; William A. Hamann, of the Roessler & Hasslacher Chemical Co.; B. H. Huttmann, of Glatz & Huttmann; Edward H. Kidder, of New York Coal Tar Chemical Co.; Howard Kirkland, of New York Quinine & Chemical Co.

Manufacturing Perfumers.—Sturgis Coffin, of Ladd & Coffin; Theodore Ricksecker; Henry Dalley, Jr., of Lazell, Dalley & Co.; Bowles Colgate, of Colgate & Co.

Manufacturing Pharmacists.—Benjamin T. Fairchild, of Fairchild Brothers & Foster; Samuel W. Bowne, of Scott & Bowne; A. H. Mason, of Seabury & Johnson; E. Stoffregan, of Sharp & Dohme; Charles Killgore.

Importers of Drugs and Chemicals.—John H. Stallman, of Stallman & Fulton; George Massey, of Lanman & Kemp; Theodore Weicker, of Merck & Co.; Francis H. Sloan, of Dodge & Olcott; John J. Riker, of J. L. & D. S. Riker; Bernard G. Amend, of Eimer & Amend; Victor Koechl, of Schulze-Berge & Koechl.

Importers of Essential Oils.—George H. Olcott, of Dodge & Olcott; Carl Brucker, of Fritzsche Bros.; James B. Horner, and others to be named.

Telephone Troubles in Brooklyn

At the meeting of the Kings County Pharmaceutical Society held at the college on Tuesday, February 13, a committee of three, consisting of Messrs. France, Bliss and Werner, was appointed to confer with a like committee from the Kings County Medical Society and the Homeopathic Medical Society to the end that united action be taken to oppose what they call the unwaranted action of the telephone company in forcing them to have pay stations in their stores.

Recently an order was issued by the company forbidding others than the owners from using a telephone without payment. The druggists and doctors took exception to this and are in no mood to be imposed on. They claim that they were the first to use the telephone and did more to make it popular in this city than any other class and still comprise more than half of the subscribers. When it was originally introduced the company, the druggists claim, induced them to hire a telephone, as it would be a great accommodation to their customers. Now the druggists contend that the company is nothing more than a grasping monopoly trying to force pay stations in every drug store to the detriment of the poor people who are obliged to use it in calling physicians, etc. The following letter was read and received with applause. It created some discussion:

To the President and Members of the Kings County Pharmaceutical Society.

GENTLEMEN: The question of the use of telephones in this city has assumed a serious form and is one of no mean proportions. I hardly believe that the druggists realize the object of this gigantic monopoly in forcing them to place pay stations in their stores or to have their old phones taken out. The discrimination that is observed against our profession by this company is extraordinary; for example: If the company cannot force a pay station into your store under a guaranty of $12.50 per month, it will try $10 and so down to no guaranty, as in my case, when the representative of the company offered me a one-month contract and no guaranty to see how I would enjoy charging the medical fraternity and unfortunate customers who desired the services of their physicians for the benefit of the company, which claimed 80 per cent. of these charges. There is a certain druggist on Fulton street who objected to having a pay station in his store. The company compromised with him by placing his old phone in the rear room at the same rental for the privilege of having a pay station in the store, allowing him 20 per cent. of the charges.

Have the members of the profession ever taken time to consider the meaning of this discrimination, the true intent of these threats, and the bulldozing methods which this company has adopted during the past six months? The plain intention is to cut off all free communication from subscribers who desire to communicate with their offices or places of business.

Brother members, the question that now confronts you is, Can we allow this company to drag us down from the high position we hold in this city?

What will its citizens think?

What will the medical fraternity say?

What will our brother members in other cities think when they find that Brooklyn druggists have surrendered and are in the grasp of this gigantic monopoly, whose only characteristic is greed?

I do not ask my brother druggists to take up my cause, for I am through with the company, as I never intend to become a subscriber until it returns to honorable business methods; but I do ask you to take action that you may repel this scheming monopoly from lowering the standing of our profession.

Very respectfully yours,

FEBRUARY 13, 1894. THOMAS J. FRANCE.

President Brundage said that the telephone matter was one in which every druggist was interested. In Baltimore, he said, the telephone company did what the local company is trying to do here, and the physicians and druggists appealed to the Maryland legislature. It resulted in the charges on 'phones being reduced and a loss of 60 per cent. of the subscribers. Other members spoke and it was agreed that the members stand together. The joint committees will call on the telephone company and ask that better arrangements be made. If the latter refuses, action will be taken at the next meeting

which may result in all druggists removing the instruments from their places of business.

There were two papers read as reported last week, one on the preparation of citrate of magnesia and one on the preparations of the new pharmacopœia, the former by W. B. Averre, and the latter by Dr. J. F. Golding. A discussion followed. The committee appointed in December to confer with District Attorney Ridgway concerning the sale of drugs in dry goods stores by unlicensed clerks reported that he promised to take action, but had done nothing. The League plan was endorsed.

The U. S. Capsule Co. in the Courts.

The courts have been appealed to to settle a dispute among the stockholders of the United States Capsule Company. This company, as was stated in our issue of December 14, was organized for the purpose of consolidating the Merz Capsule Co., the Warren Capsule Co., and the Michigan Capsule Co., of Detroit, and National Capsule Co., of Indianapolis.

The attorneys for the U. S. Capsule Co. make the following statement:

"The reason for this consolidation was that the several companies above mentioned possessed different patents and operated under different processes, each of which had its special merits and points of advantage. It was desired to unite all of the advantages which were possessed by the various processes belonging to the respective organizations in order to produce a better capsule, and one which would more fully meet the requirements of the trade. The combined capacity of the four plants will be greater than the aggregate capacity of the plants operated separately and the cost of production more economical. After the United States Capsule Co. was organized each of the other companies conveyed all of its plant and property to the new company and received stock in payment therefor. The intention of the new company was that the old plants should continue to be operated under substantially the same management as heretofore. After the consolidation was completed and all the property had been transferred, the Merz Capsule Co. refused to deliver the property which it had agreed to convey, and for which it had executed and recorded a bill of sale, and has filed a bill to set aside the conveyance and the agreements under which the consolidation was effected upon the ground that the agreement was void, as being in restraint of trade. The litigation only affects the Merz plant. The other three plants are being operated to their fullest capacity, and are now doing a good business."

The Merz Capsule Co. states that "As a Michigan corporation, we are not allowed, under the laws of this State, to hold stock in another corporation, and when advised of this fact we requested the United States Capsule Co. to allow us to withdraw from our agreement. This request was not only refused, but on January 22 representatives of the United States Co., without any lawful papers, attempted to take possession of our plant and forcibly removed part of our machinery, ostensibly spirited away for the purpose of preventing us filling orders and to force us into the combination. We have taken the matter into the courts, and shall fight it to the end. We have already arranged to replace the machinery which was removed, and are able to take as good care of our orders as the circumstances permit. The litigation in progress affects only the hard empty capsule part of our business, and does not concern our soft goods or filled capsules."

Meeting of the New York Branch of the League.

A meeting of the local branch of the Interstate Retail Druggists' League was held on February 16 at their rooms in the Mott Memorial Hall, 64 Madison avenue. The meeting was notable for the enthusiasm displayed by members, about thirty in all being present. After roll call Oscar Kress was appointed temporary secretary, Mr. Falkenreck being absent. Several matters of moment to the league were discussed and on motion of President Osmun it was decided that a suitable blank for signature be prepared in which the advantages of the new rebate plan be set forth and that each member be provided with a copy to act as canvasser in his own district. This motion was after some little discussion as to other plans unanimously adopted, each member pledging himself to work faithfully for the promotion of the objects indicated. The president was thereupon authorized to procure such blanks as speedily as possible and to provide each member with a copy. Seven new members were enrolled at this meeting.

The next meeting of the local branch will be held in the Mott Memorial Hall, 64 Madison avenue, on Friday, March 2, at 3 P.M., and a large attendance of local druggists is looked for. The hall is admirably well adapted for meetings of this kind.

Wholesale Drug Trade Bowling Association.

The wholesale drug trade of New York City have organized a bowling association and a tournament has been arranged, the opening games of which were rolled Saturday. Parke, Davis & Co., Seabury & Johnson, Whitall, Tatum & Co., McKesson & Robbins, Dodge & Olcott, and C. G. Bacon & Co. are represented by teams, and it is expected that the games will bring together the best element of the trade and will promote good feeling generally.

The programme of the games which will be rolled on Saturday afternoons at 409 Pearl street is as follows:

February 17—Whitall, Tatum & Co. *vs.* Parke, Davis & Co. and Seabury & Johnson *vs.* Whitall, Tatum & Co.

February 24—McKesson & Robbins *vs.* Dodge & Olcott and C. G. Bacon & Co. *vs.* McKesson & Robbins.

March 3—Seabury & Johnson *vs.* McKesson & Robbins and Parke, Davis & Co., *vs.* Seabury & Johnson.

March 10—C. G. Bacon & Co *vs.* Whitall, Tatum & Co. and Dodge & Olcott *vs.* C. G. Bacon & Co.

March 17—McKesson & Robbins *vs.* Parke, Davis & Co. and Dodge & Olcott *vs.* Parke, Davis & Co.

March 24—Seabury & Johnson *vs.* C. G. Bacon & Co. and Parke, Davis & Co. *vs.* C. G. Bacon & Co.

March 31—Dodge & Olcott *vs.* Whitall, Tatum & Co. and Seabury & Johnson *vs.* Dodge & Olcott.

April 7—Whitall, Tatum & Co. *vs.* McKesson & Robbins.

Games commence at 3.15 P.M.

The officers of the association are G. S. Mariager, president; T. M. Mannion, with W., T. & Co., secretary and treasurer, and W. W. Tamlyn, statistical secretary.

Random Notes of a Rambling Journey.—VII.

TAMPA AND KEY WEST.

The southern shores of Florida are only distant some two or three hundred miles from Cuba and the islands of the West Indies, being separated from the latter by the blue waters of the Gulf of Mexico and Straits of Florida. Naturalists tell us, however, that this comparatively short stretch of water is sufficient to leave South Floridia distinct in biological characteristics from Cuba and the other islands of the Antilles. They seem to be agreed that Florida belongs to the Eastern division of the Neartic Southern coast and is essentially North American. All of which I found a little difficult to understand when confronted in Tampa on December 22, 1893 (and later in Key West), with many of the evidences of a truly tropical clime. On the day mentioned, when people in the North were protecting themselves as best they could against the chilling inroads of the frost laden breezes, we stood on the Esplanade or plaza of that magnificent monument to the enterprise of H. B. Plant—the Tampa Bay Hotel—overlooking a wealth of semi-tropical verdure consisting of palms, cycades, tamarinds, olive, cacti, wild fig, mango and guava, not to mention many other tropical and semi-tropical trees and shrubs whose enumeration in these notes would scarcely be permissible, so extensive is the list. The air was hot to the verge of sultriness, though the atmosphere was clear and bright and the thermometer marked but 80° in the shade. Glancing skyward one could see the great black bodies of a flock of buzzards as they wheeled lazily in circles overhead; scarcely a breath of air stirred, the whole scene being eloquent of the enervation which seems to be an accompaniment of life in Southern latitudes.

The majority of the people hereabouts are of a hardy Northern stock, however, and do not allow themselves to be easily overcome with the torpor of their climatic environment. I found the principal pharmacist of the town to be a New Hampshire man who counts many of his friends among the drug trade of both Concord and New York; he will also be remembered by many of the trade in Milwaukee, Wis., as he conducted a successful pharmacy in that place for a number of years. This is Isaac N. Morton, proprietor of "Morton's Drug Store" in Tampa for upward of three years, who like his equally prominent rivals in business, S. B. Leonardi & Co., does a general business in drugs, surgeon's and oculist's supplies, newspapers, books, magazines, etc.

The condition of pharmacy in Tampa is good at the present time, every indication pointing to the existence of excellent relations between the physicians and pharmacists of the town, and no cutting appears to be practiced. Port Tampa, from which we took steamer to Key West, is the southern deep water terminus of the Plant System, which with the rapid development of trade with South America and the West India islands has become a center of great activity. A hotel known as "The Inn" under the same management as the Tampa Bay Hotel has been built on a pier over the water about a mile from the shore. It is a most picturesque-looking building of the Queen Anne cottage style of architecture, in the construction of which every convenience looking to the comfort of guests has been utilized.

Leaving Tampa about 10 o'clock in the evening, Key West is reached next day about noon, and what a scene is that which is presented to the view of travelers as the steamer nears this veritable gem of the Gulf! Under a cloudless sky of blue whose intense depths of azure found ready reflection in the milky blue waters of the gulf we sailed slowly into port. The island, with its irregular markings of clear white, blue, red and yellow softened by distance, presented a scene of picturesque beauty difficult of comparison and still more difficult to forget.

The trip over was made on the S. S. Mascotte, of the Plant Line commanded by Captain Hanlon, and proved a very pleasant experience. Captain Hanlon's boat is the smallest of the fleet and by many considered the most comfortable; but the entire service of the system with which H. B. Plant's name is connected is well designed for the comforts of travelers and deserving of the highest praise.

Key West is the capital of Monroe County, Florida, and derives its name from *Cayo Hueso*, Spanish for bone key. On the north its beach is lapped by the opaque blue waves of the Gulf, while its coasts to the east and south look out on the Straits of Florida, the waters of which present a peculiarly milky blue appearance from the suspended particles of coral rock, disintegrated by the storms which rage with periodical violence around the island.

The arrival of the steamer at Key West is always an event of interest to the people of the island, peddlers, hackmen and others of that class depending almost solely on the tri-weekly visits of the boats for means of subsistence. What seem to be a perennial source of profit and amusement to passengers and others are the feats of diving performed by boys in the water close to the wharf. Diving for small coin is the game, and on the day we landed business was good The rapidity with which these urchins dived and intercepted a nickel half way to the bottom, never failed to elicit expressions of surprise from the passengers. The most fun is furnished when two boys happen to dive for the same nickel and grapple with each other a few feet from the surface.

A note on a visit to a Key West cigar factory and an account of the sponge fishing industry of the island are reserved for a future letter.

THOMAS J. KEENAN.

Fire at Farrand, Williams & Clarke's.

Detroit can make claim to having had more large drug fires than any other city in the United States. In 1882 James E. Davis & Co., after having been in business only six months, were visited by the fire fiend and suffered a 50 per cent. loss on a stock of $70,000; again in 1891 this same firm were the victims, sustaining a total loss, their stock amounting to upward of $175,000.

In January of this year T. H. Hinchman & Sons were burnt to the ground, suffering a loss of $90,000, and on the morning of Feb. 15 Farrand, Williams & Clarke were burnt to the ground, suffering a total loss, amounting to $170,000.

Very fortunately for the retail drug trade of Detroit and neighborhood the firm of Williams, Davis, Brooks & Co. have but recently moved into their beautiful new esablishment, and with their immense new stock of goods, amounting to upward of $350,000, have been able to place at the disposal of their unfortunate competitors their stock, thus enabling them to take good care of their customers with almost their usual promptness

Farrand, Williams & Clarke, with the usual promptness, energy and enterprise of the western merchant, began at an early hour on the same day as their fire to telegraph to the various concerns from whom they purchase their supplies for a new and complete stock, and they hope by the time the goods come in, which will be within a week, to have their new quarters ready to receive the same. They will occupy the building formerly used by Williams, Davis, Brooks & Co., which is located at 11 to 17 Larned street, the main building being 110 x 80 and five stories high, the annex 60 x 80 and two stories high, both with basement. This building has been in the course of preparation for their moving in for some little time back, and when they have become settled in it with their new stock they will be one of the best equipped wholesale drug establishments in the West. This concern has received a very large number of telegrams and letters of sympathy from all over the country from their friends, and offers of all sorts of assistance from the local trade. Let us hope that the black cloud which has come may be found to have its silver lining for them.

Obituary.

DR. THEODORE BILLROTH.

Theodore Billroth, one of the most eminent surgeons of this century, was born at Bergen, on the island of Rügen, on April 26, 1829, and died on February 6, 1894. He studied medicine at the Universities of Greifswald, Göttingen, Berlin, and Vienna; in 1855 he became Dr. Langenbeck's assistant at the University Clinic of Berlin, and began to lecture in the following year. In 1859 he accepted a professorship at the University of Zurich, which he left in 1867 for Vienna, where he has remained ever since, as one of the chief ornaments of the medical faculty. During the Franco-German war he was one of the leading surgeons in the hospitals along the Rhine. Dr. Billroth's original researches affected many branches of medical science, notably histology, general pathology, and improvements in war surgery and hospital management. Among his best-known treatises are those entitled "Surgical Letters from the Field Hospitals at Weissenburg and Mannheim," "On the Transportation of the Wounded," "On the Learning and Teaching of Medicine at German Universities," "Surgical Clinique," "Handbook of General and Special Surgery," and many others. He has also been since 1861 one of the editors of Langenbeck's *Archiv. für Klinische Chirurgie*. Dr. Billroth has also exerted much influence on medical progress indirectly through his pupils. One of his most sensational operations was the first successful extirpation of cancer of the stomach.

GEORGE E. SHIELS.

George E. Shiels, one of the oldest and best known druggists in this city, died at his home, No. 53 East Twelfth street, on Sunday morning, February 18, of heart disease. He was born in the city of Merida, Yucatan, Mexico, April 23, 1826. He was graduated from the College of Pharmacy in 1851. In 1853 he established his own store in what was then uptown New York, on the corner of Sixth avenue and Twenty-third street. Here he remained until the buildings there were demolished to make room for Booth's Theater. Moving then to 896 Broadway he remained there until that building was demolished. His last move was to No. 821 Broadway, in 1886. During the 42 years that he was in business, up to a few weeks before his death, he never missed a day from his store. Two sons and a widow survive him.

Edmund A. Crenshaw, Sr., of the Philadelphia wholesale drug house of Bullock & Crenshaw, died on Monday, aged about 70 years. This is one of the oldest drug houses in the trade and many of its former employees are now heads of other firms. Mr. Crenshaw and his partner were the first to introduce sugar-coated pills, but it was not long before they had many followers. During the war this house received most of the contracts for furnishing medical supplies to the army and navy, and this fact not only brought the firm into great prominence, but also added prosperity. In recent years Messrs. Bullock & Crenshaw have been devoting most of their attention to specialties.

Boards and Colleges.

THE LOUISIANA BOARD OF PHARMACY met at the office of the secretary, Walter T. Taylor, at N. Ranyar and Clourt streets, New Orleans, on Friday, February 9. The following applications for registration as registered pharmacists were favorably considered, and certificates as such were ordered issued to each: C. Goodwill, Monroe and Emile Helman. C. D. Sauvinet, A. B. Schmitt, Simon Verburg, E. H. Walsdorf, J. S. J. Otto and A. C. Freitag, of New Orleans.

The applications of Robt. Jackson, of New Orleans, Jas. C. Armitage, of Burnside, and F. W. Smylie, of Centreville, were held back for additional information. J. W. Lea, of Jackson, was refused registration. The following candidates for examination were ordered to appear before the committee on examination on Saturday the 10th inst., for qualified assistant's certificates: E. F. Bacon, C. E. Kruch, C. A. Lopez, G. Charbonnet and C. G. Magruder. For registered pharmacist's certificates: B. F. Holmes, W. J. Hosea, C. G. Magruder, A. Javelet, W. R. McHenry, F. R. Burton, R. E. Robinson and H. J. Fournet.

After transaction of further routine business the board adjourned to meet on call of the president during first week of May.

SCHOOL OF PHARMACY OF NORTHWESTERN UNIVERSITY.—The spring and summer term began on the first of February with a class of 135 students. The winter class graduated February 6, the exercises being at the Auditorium Hall, Chicago. Prof. Quine delivered the address. One of the graduates, Rudolph S. Steensen, presented to the library of the school on behalf of his father, Dr. J. Steensen, of Sioux Falls, S. Dak., a set of Nees von Esenbech's Plates of Medicinal Plants, a rare and valuable work published in 1812. J. Frank Post, the spokesman of the graduating class, discussed compulsory pharmaceutical education in a clear and interesting way. The University medal was awarded to Leopold Simon, of San Antonio, Texas, and the junior prize to M. H. Webb, of Bryan, Texas. Honors were also awarded to David F. Jones, of Portland, Wis.; John H. Look, of Sheboygan, Wis.; J. Frank M. Post, of Murphysboro, Ill.; Frank B. Wynkoop, of Wauconda, Ill., and E. Roy Lovett, of Galion, Ohio.

The graduates were: James Adams, Le Mars, Iowa; William L. Becker, Dubuque, Iowa; John Broadwater, Memphis

Mo.; Stafford Campbell, El Paso, Tex.; A. Burton Clevidence, Mt. Morris, Ill.; John C. Conibear, Morton, Ill.; Thomas M. Cross, Decatur, Ala.; Fred. E. Curtis, Metropolis, Ill.; William F. Eggert, Chicago; Robert R. Enlow, Bloomington, Ill; Elmer Ewing, Bluffton, Ohio; Herbert L. Fulton, Chicago; Harry H. Gardner, Vermont, Ill.; Charles E. Giese, Milwaukee, Wis.; Fred. W. Gregg, Cherokee, Iowa; Charles P. Guenther, Freeport, Ill.; Frederick C. Hartshorn, Pontiac, Ill.; Lewis O. Hieber, Cedar Falls, Iowa; Herman B. Jaehnig, Red Wing, Minn.; Theodore Kaiser, Ottumwa, Iowa; Charles H. Law, Menominee, Mich.; Harvey Lichtenwalner, Monroe, Wis.; Henry E. Lindblade, Rockford, Ill.; John H. Look, Sheboygan, Wis; Otto G. Luehrs, Cherokee, Iowa; Julius A. Lyon, Chicago; Edward G. Marsh, Bowen, Ill.; James H. Miller, Ney, Ohio; William C. Morgan, Omemee, Ont., Can,; Howard L. Norris, La Grange, Ind.; Harry O. Patterson, Griswold, Iowa; William M. Pfennig, Janesville, Wis.; Bert R. Phillips, Rushville, Ill.; J. Frank H. Post, Murphysboro, Ill.; Arthur Price, Elizabethtown, Ill.; Benjamin O. Price, Big Rock, Ill.; George S. Roberts, Fox Lake, Wis.; Edward F. Rossman, Greenwood, Wis.; Hauphrey H. Sherwood, Shabbona, Ill.; Leopold Simon, San Antonio, Tex.; Herbert M. Snider, Peoria, Ill.; Rudolph S. Steensen, Sioux Falls, S. Dak.; Leo Steinberg, Lebanon, Mo; Dillon Swingle, Athens, Ill; Frank S. Tarbill, Sparland, Ill.; Egbert W. Van Delden, Lyons, Iowa.

Western Notes.

Morrisson, Plummer & Co., of Chicago, have added to their large establishment the building adjoining the one now occupied, formerly occupied by Gerts, Lombard & Co., brush manufacturers, which covers a space of 80 by 165 feet, and will be used entirely for their sundry department. This department has been in charge of T. C. Ballard, and through his efficient management its growth has been almost phenomenal. Mr. Ballard has been connected with Morrisson, Plummer & Co. for the past six years and is known from coast to coast as one of the best friends of the traveling man. This firm well deserves the success that has come to them, as every one of the firm is a hard worker and at his place of duty early and late. The courtesy extended to every caller is a large factor in their popularity.

C. H Bayard, western representative of Calvin Shafer & Co., 86 Cortlandt street, N. Y., the oldest manufacturer of fruit juices for soda water syrups in this country, was met by your representative in Chicago last week, and he reports the outlook for business in his line the best for years. Mr. Bayard is one of the best known traveling men in the country, having been with this one concern 14 years, and his fund of interesting stories has kept many a blue traveler, during the dull times just past, from giving up.

White & White, retail druggists of Grand Rapids, have a wagon the back part of which is made in the shape of a mortar and pestle. This opens so that packages can be put in.

Dr. Nelson Abbott, formerly of Lima, Ind., has purchased the drug store of N. E. Leighton, of Kalamazoo.

The manager of the H. T. Clark Drug Co., Lincoln, Neb., fell and broke his arm recently.

NOTES ON PRICES.

FRESH ADVANCE IN MORPHINE.

Rosengarten & Sons and Powers & Weightman, manufacturing chemists, Philadelphia, announce in circulars under date of February 19 that they have from that date advanced the price for acetate, muriate and sulphate of morphine, by 25 ounces or more, to

$2.50 per ounce, including ⅛ oz. vials in 1 oz. boxes.
$2.45 per ounce, including ⅛ oz. vials in 2½ oz. boxes.
$2.25 per ounce, including 1 oz. vials.
$2.20 per ounce, in bulk.

WHOLESALE DRUGGISTS' PRICES.

The volume of business for the past two or three weeks still continues of encouraging proportions, indicating a good general business among retail druggists. Orders are being received in fair amount for grippe remedies, the demand for these goods being apparently in excess of the usual average.

We note below the important changes which have taken place during the past month in the prices at which retailers usually purchase goods in ordinary lots.

ASAFŒTIDA has advanced to 30 @ 35c. for whole and 45 @ 50c. for powdered gum.

BERRIES—Cubeb, powdered, has declined to 35 @ 40c.; Juniper, ground, is lower at 15 @ 18c.; Prickly Ash, have also declined, 35 @ 40c. being now obtainable.

CARBON DISULPHIDE is lower, 15 @ 20c. being current figures.

CHLORAL HYDRATE has advanced to $1.45 @ $1.85.

CLOVE has declined, and is now quoted 12 @ 14c.

COCAINE MURIATE, cryst., has advanced in the interval, and the range now stands $6.24 @ $6.45.

GUAIACOL is reported dull at 75c., being a decline of 10c.

GUMS—Opium has advanced materially in the interval, and is now quoted $3 @ $3 25, powdered being higher in sympathy at $3.75 @ $4.

MORPHINE has also advanced; we quote the range $2.35 @ $2.50.

OILS—Cubeb has declined and is now to be had at $2.25 @ $2.50; Peppermint of the different grades is higher, New York State and Western being held at $2.75 @ $3. and HGH $3.25 @ $3.50; Redistilled is quoted $3.25 @ $3.50; Wormwood is lower at $3.50 @ $4.

PIPERAZINE is lower, being now quoted $2.75 for ounces and $1 for tubes.

QUININE has marked a further advance and is firm at 25 @ 32½c. for bulk. Ounces offer at 32 @ 39½c.; bi-sulphate is also higher at 34½c.

ROCHELLE SALTS has declined to 21 @ 23c.

SOMATOSE is an addition to the list and quoted $5.50 per lb. in eighths.

Review of the Wholesale Market.

NEW YORK, February 21, 1894.

It should be understood that the prices quoted in this report are strictly those current in the wholesale market, and that higher prices are paid for retail lots. The quality of goods frequently necessitates a wide range of prices.

The trade in drugs, dyestuffs and chemicals during the week has been of a fairly animated condition, though no new features of importance have developed. In small lots there is a continued fair movement, but speculative interest in original packages is still lacking, and the market in consequence bears a comparatively tame appearance. Taken as a whole, however, the market continues firm in tone, prices being maintained upon a generally steady basis. About the usual number of price changes have occurred. Cascarilla bark is higher, and the same may be said of gum kino, kola nuts, coca leaves, gambier, codeine. Declines are noted in the following: Lithia preparations, menthol, small flake manna, celery seed, naphthaline, salol, Japan wax. Opium is unsettled.

DRUGS.

ALCOHOL shows no further change from the advance noted in recent issues, the trust taking orders at $2.24 @ $2.28 as to quantity for grain. Wood is unchanged.

BALSAM COPAIBA continues scarce, the small available supply being closely concentrated in first hands. The *Daisy C. Parkhurst* from Ciudad Bolivar to arrive has six boxes. For the small lot of Para now in first hands 35c. is asked, but business at this range is limited, buyers looking for lower figures.

BALSAM FIR has remained quiet at the previous range of $3.75 @ $4 for Canada; Oregon is passing out in moderate jobbing quantities at 80 @ 85c.

BALSAM TOLU is held at 25 @ 27c. with, however, a limited demand at the moment.

BARKS of the various kinds are jobbing fairly. Cascara Sagrada continues to find purchasers at 5½ @ 6c. with 5c. quoted for goods on the way. Cascarilla has been advanced to 5½c. for sifted with some considerable sales said to have been made for shipment abroad. Ordinary quality to arrive offered at 4¾c. Soap is firmer with the indication favorable for improved values in the near future; prices, however, are without quotable change. The range of the market is 3¾ @ 4¼c.

BUCHU LEAVES, short, continue in steady, moderate request for all grades running from common to prime and the prices realized 10 @ 12c. as to quality. The leaves are reported as in better position with the cost of prime green to import full 9c.

CACAO BUTTER, Dutch, is almost out of market, but supplies are expected shortly by the *Etruria*. The nominal price is 32 @ 32½c.

CIVET is scarce and prices are slightly higher, $5 @ $6 being generally required.

COCAINE MURIATE continues firm at the recent advance and a moderate trade is reported at the current range of $5.50 @ $5.90 as to quantity.

COD LIVER OIL, Norwegian, has been in fair request during the week and we note among other transactions a sale of 20 bbls. at $19.50.

CODEINE is firm at the recent advance and sales are making at the improvement, say upon the basis of $4.25 for bulk alkaloid in a quantity way.

DOG GRASS has attracted some attention during the interval and we are reported a sale of 500 lbs. at 5c.

ERGOT is meeting with considerable inquiry, but business is somewhat restricted as holders are disinclined to meet the views of buyers. German and Russian are quoted 24 @ 28c. and Spanish 28 @ 30c. as to quality and quantity.

JABORANDI LEAVES continue held at 25 @ 35c. with prospects of an early decline, a considerable parcel being in transit and offering at 20c. to arrive.

JUNIPER BERRIES continue to meet with fair moderate inquiry at the quoted range of 2¾ @ 3c. Among other transactions we are reported a sale of 500 bags on private terms.

KOLA NUTS are now offering to arrive at 18c.

MENTHOL is quiet with the tendency of the market easy. Ordinary Japanese to arrive quoted $5.

MORPHINE is somewhat scarce and a premium is in some instances exacted; for the small available stock of P. & W. As noted above both P. & W. and R. & S. have advanced their prices to $2.50 in eighths.

NAPHTHALINE has declined here to 4c. for ball and 3 @ 3¼c. for flake. The price for forward shipment being 3½c. for balls.

OPIUM in this market appears to be in strong statistical position, the article having reacted from the bearish influence of a number of operators who attempted unsuccessfully during the week to break prices. A number of large sales are reported of high test stock, about 200 cases in all representing the aggregate distribution. The lowest open price now named for single cases is $3, and the market is now quoted firm at this price. Cables from primary sources are of a very strong character, those from Constantinople advising 11s. 6d, with the stock rapidly being diminished; while Smyrna reports 11s. 6d. The information is also furnished that fully 80 per cent. of the fall sowings are a total loss, though the trade here are rather skeptical of this latter statement. The jobbing price is about on a par with the case value. Powdered has been advanced to $3.70 @ $3.95.

QUININE has quieted down to some extent, but continues in steady fair inquiry with a further appreciation in prices looked for. Foreign in second hands is passing out at 23¾ @ 24c. though manufacturers' prices continue firm at 25c. for foreign and 27½c. for domestic.

SALOL is reported to have declined materially at primary sources, the equivalent here of German makers' prices now standing at $2. The previous quotation of $3.85 is regular here as the article is patented in the United States. It is doubtful, however, whether this price can be maintained in face of the lower cost at primary sources.

SENNA, Tinnivelly, continues to meet with moderate inquiry and we are reported jobbing sales at 6 @ 18c. as to quality. Natural Alexandria is well sustained at 18 @ 25c.

SOAP, Conti's white, is easier owing to the increased quantity available; purchases can be made at 9⅝ @ 9¾c.

TONCA BEANS, Angostura, are in better demand and with a small available supply. The tone of the market is stronger. We quote $1.85 @ $2.

VANILLA BEANS, cut, are firm with a moderate distribution reported at the range of $5 @ $5.50; whole are quoted $6.50 @ $13.

DYESTUFFS.

CUTCH is without important change. Jobbing sales are making at 5¾ @ 6c. for prime grades. SM 5¼ @ 5½c. and 5¼ @ 5½c. for HT.

DIVI DIVI is reported in fair inquiry, and selling in a moderate way at 55 @ 65c.

GAMBIER is in improved statistical position with 4¾c. quoted as an inside value for store goods in a quantity way, and for jobbing parcels up to 5c. is wanted.

NUTGALLS, Blue Aleppo, are well maintained at 13¾ @ 14¼c. as to quantity, with numerous sales within this range.

SUMAC, Sicily, is held and selling in a small way at $72.50 @ $77.50.

CHEMICALS.

ALUM continues steady and in request with sales of lump at $1.70 @ $1.75 and ground $1.75 @ $1.80.

ARSENIC, White, continues in fair inquiry with current sales at 3½ @ 3¾c. as to brand.

BLEACHING POWDER is in limited demand at the moment, but the supply is light and the market firm at $2.25 for German and $2.50 for English. Blue Vitriol meets with moderate sale and the price is maintained at 3½ @ 3¾c.

BRIMSTONE, crude seconds, is dull and easy with parcels to arrive quoted $18 and forward shipment $17 @ $17.50.

CAUSTIC SODA is without important change, but is under better control and tending firmer. Sales are making to consumers of 70 and 74 per cent. at $2.50 @ $2.65.

CHLORATE OF POTASH is quiet with prices nominally unchanged. German crystals quoted at 14 @ 14½c. and English at 14½ @ 14¾c.

CITRIC ACID is dull and easy, with kegs offering from second hands at 42½c.

CREAM TARTAR is quiet, though no quotable change in price is reported, crystals held at 17½, and powdered at 17½ @ 18c.

NITRATE OF SODA is maintained firmly, and moderate sales are reported at the range of $1.92½ @ $2.

OXALIC ACID is in moderate request and firm. The sales are at 6¾ @ 7c. for German and 7 @ 7¼c. for English.

QUICKSILVER is unchanged from 45c. @ 46c.; only jobbing sales are making.

ESSENTIAL OILS.

ANISE develops no action of any consequence, purchases in most instances not exceeding jobbing quantities. The quotation remains $1.42½ @ $1.45.

BERGAMOT is steady and quoted at $1.75 @ $2 40.

CASSIA yet offers at 80 @ 85c. without, however, exciting any interest of a speculative character.

CLOVE is readily obtainable at 50 @ 53c., but the trade requirements are light.

CUBEB continues dull, but the market does not vary from $1.50 @ $1.70.

PENNYROYAL remains quiet, without, however, any quotable change in price. Prime grades, domestic, held at 90c. to $1.

PEPPERMINT continues inactive, the article being momentarily neglected. HGH is very dull, export demand being entirely absent. The general asking price is $2.80 @ $2.85, though in exceptional instances $2.77½ can be done. Bulk is unchanged, the range upon Western and State oil being $2 45 @ $2.60.

SASSAFRAS is without important change; pure held at 36 @ 40c.

WINTERGREEN is jobbing at $1.40 @ $1.50, this quotation being for pure; artificial is held at 80 @ 87½c.

GUMS.

ARABIC, sorts, have been actively inquired for and we hear of a sale of 50 bags at 10c. The market appears stronger in tone with 10 @ 11c. representing the range.

ASAFŒTIDA is quite actively inquired for, all grades participating in the interest extended. We hear of numerous sales in a jobbing way at the range of 15 @ 30c. Prime grades are in small supply and late advices from the London market advise an appreciation in value. Prices here have advanced in sympathy and 20 @ 30c. now represent the range.

BENZOIN has been in moderate inquiry during the week with numerous jobbing sales at 40 @ 47c. as to quality.

CAMPHOR is dull and easy, though not quotably lower. Domestic in a large way may be obtained at 44c. and 45c for bbls. and cases, but for jobbing parcels 45c. and 46c. are quoted respectively.

CHICLE does not attract increased attention. The stock in this market is large but does not offer below 27 @ 28c., hence there is no great pressure to realize.

KINO is well maintained at the recent advance to $1. The stock is small and concentrated.

MASTIC is in moderate demand with supplies held at 57 @ 70c. as to quality.

SENEGAL has been inquired for and we are reported among other transactions. sales of 15 cases on private terms.

SHELLAC is in moderate jobbing demand and firm upon the basis of 25 @ 27½c for TM quality. Speculation is momentarily suspended however. The indications are for a higher market.

TRAGACANTH has sold to some extent in the interval but the range is steady at 32 @ 36c. as to quality.

ROOTS.

ALKANET continues to offer at 6 @ 7c.

ALTHEA, cut, is firm at 18 @ 20c.

DANDELION is maintained at 7½ @ 8c. with moderate jobbing sales.

GALANGAL is held at 3½ @ 4c., but inquiry at the moment is rather limited.

GENTIAN does not change from 3½ @ 4c. with only a moderate demand making.

GINGER, new crop Jamaica, unbleached arriving, is held at the range of 12 @ 16c. as to quality.

GINSENG is maintained at $2.50 @ $3.60.

GOLDEN SEAL meets with a very moderate sale; the quotation, however, remains 22½ @ 23c.

IPECAC is inquired for to a moderate extent with jobbing sales making from $1.35 @ $1.40 as to quality.

JALAP continues dull at the range of 23 @ 27c. as to quality.

SARSAPARILLA, Mexican, is inquired for and in small parcels stock is going out at 9½c.

SENEGA is quite actively inquired for with sales and re-sales aggregating 6,000 lbs., the greater portion being taken for export at 38 @ 40c.

SNAKE, Texas, continues to offer at 30c., though the demand does not increase to any appreciable extent.

SEEDS.

ANISE, Italian, sifted, has continued in request with further sales for export at 10 @ 10½c.

CANARY, Smyrna, is held at 2¾c. as an inside figure for prime quality and sales to a moderate extent are making at this price.

CELERY is yet obtainable at 15c., though no special inquiry is reported.

CARAWAY, Dutch, is quiet though firm at 7c.

FENUGREEK is maintained at 3c. with sales to a moderate extent at this figure.

CORIANDER, unbleached, has sold to the extent of 12,000 lbs. on private terms. The quotation of the market is 5¾ @ 6c.

HEMP, Russian, in a jobbing way realizes 2¼ @ 3½c.

MUSTARD, California yellow, has sold freely in the interval. The general asking price for jobbing quantities is 3½ @ 4c.

RAPE, English, is very scarce and quoted nominally 3½c. German is quiet at 2¾ @ 2⅞c.

Cincinnati Items.

Wilmot J. Hall is laid up with the gout at the Grand Hotel.

John C. Fratz, the West End druggist, died last week from la grippe.

R. Weatherhead, the downtown druggist, is suffering with a very bad cold.

A. Bell, formerly of the firm of Gray & Bell, is now representing Woodbury's facial soap.

Otto Stephan, formerly with Groenland Bros., will hereafter manage the drug store owned by his father.